

# Evidence-Based Age-Appropriate Interventions

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**A Guide for Child and Adolescent Mental  
Health Services (CAMHS)  
2008**

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**The Werry Centre  
for Child and Adolescent Mental Health  
Workforce Development**  
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A significant contribution to this document has been made through the review documents of Fonagy, Target, Cottrell, Phillips and Kurtz (2000). Research that has been completed since this time was sourced from a compilation document published by Wolpert, Cottrell, Fonagy, Fuggle, Phillips, Pilling, Stein and Target in 2006.

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## BACKGROUND

Welcome to this reference guide on Evidence-Based interventions for children and young people experiencing mental disorder. This guide has two main aims:

- To clarify for clinicians and managers, the range of child and youth mental health and addiction disorders that would be expected to be seen in primary, secondary and tertiary services, and the expected prevalence of these disorders.
- To identify the range of age-appropriate therapeutic skills/interventions that are needed to work effectively with children, young people and their family/whānau.

The guide is offered as an alternative to lengthy searches of the literature that might otherwise be undertaken to identify age-appropriate interventions. In the formulation of this guide there is recognition that children and young people with mental health concerns often present with a complexity that must be taken into consideration when planning interventions. This complexity may be a result of co-morbid disorders which are frequently present for children and young people with mental health difficulties. The document therefore also has a strong focus on the age-appropriate interventions that have been described as effective in the treatment of children and young people with one or more mental health disorder. The guide also recognises the importance of including a focus on interventions for children and young people experiencing alcohol and other drug concerns, and for this reason, interventions for this range of disorders is also included.

**Decisions regarding interventions need to be made in accordance with a number of factors which include the appropriateness of a specific intervention within a given context; the child, young person and family's acceptance of the intervention; and the costs, risks and benefits when compared with other interventions** (Wolpert, Cottrell, Fonagy, Fuggle, Phillips, Pilling, Stein & Target, 2006).



## **PART ONE:**

### **SETTING A CONTEXT FOR EVIDENCE-BASED PRACTICE**

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#### **THE PROCESS OF INFORMATION COLLECTION**

The single most significant body of literature on evidence-based treatments for children and youth with mental health disorder has been sourced from the review completed by Fonagy et al., (2000). Their review consisted of searches of the major databases including MedLine and PsycINFO. They also reviewed the articles included in large meta-analyses of child treatments and examined the bibliographies of reviews and primary studies. Overall, 830 primary studies were identified, and 648 further reports which either reviewed the treatment literature, reported clinical experience, or offered advice and opinion on child and youth mental health treatments in the areas covered. The search covered the period up to 1998. Hand searches of major journals covered the period to 2000 (Fonagy et al., 2000). Other literature was sourced to provide the most recent reviews that the authors could access. The American Academy Practice Parameters have been included in the review process to ensure that the UK and American viewpoints are both represented. Additionally there has been a focus on New Zealand research mostly derived from the two longitudinal child and adolescent development studies: The Christchurch Health and Development Study (Fergusson et al., 1997), and The Dunedin Child Health and Development Study (Feehan, McGee & Williams, 1993). To ensure the period of 2000-2006 was included, a compilation of research between 2000 and 2006 was sourced (Wolpert et al., 2006).

#### **WHY FOCUS ON EVIDENCE-BASED INTERVENTIONS?**

The principle reasons for adopting evidenced based-interventions are (adapted from Fonagy et al., 2000, p. 22):

- Enabling service-users and clinicians to make better-informed decisions (Guyatt, Sackett, Cook & the Evidence Based Medicine Working Group, 1994; Hope, 1995).
- Improved communication with children, young people and their families (Bastian, 1994).
- More effective use of resources (Hoagwood & Rupp, 1995).
- Enhancement of the clinician's knowledge.

## UNDERSTANDING THE REVIEW PROCESS

The process of reviewing interventions that have been empirically evaluated is complex. There needs to be consideration of the rigour of the evaluation **and the context in which the evaluation has occurred**. Some of the terms that are useful to understand when reviewing evidence-based interventions are:

- **Randomised Controlled Trials (RCT's):** Sometimes known as 'The Gold Standard of Research.' The participants are randomly assigned to a specific treatment, a no-treatment control, and an alternative treatment or placebo (Sprenkle, 2002).
- **Effectiveness Research:** Outcome investigations that test the impact of a treatment in a naturalistic environment (Fonagy et al, 2000).
- **Efficacy Research:** Concerned with 'laboratory' based experimental treatment trials (Fonagy et al., 2000).

The two main review processes that are employed by reviewers are:

- **Systematic Literature Reviews:** A quantitative method to identify and summarise evidence on the effectiveness of interventions. The essential elements are that the literature is reviewed using an explicit search strategy, inclusion and exclusion criteria, and evaluated against consistent methodological standards (Woolf, 1992).
- **Meta-Analysis:** A quantitative method of combining results from multiple studies, usually by creating a common metric called an 'effect size.' The most common effect size is the standardised difference between group means (Sprenkle, 2002).

## LEVELS OF INTERVENTION

The strengths of the specific interventions are offered using the model employed by John Weisz (2005) and The National Institute of Mental Health (NIMH, 2001). These are as follows:

- **Best-Supported ('Well-Established') Interventions:** These interventions require at least 2 scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** These interventions require at least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies demonstrating their impact, as well as manuals that prescribe the intervention (NIMH, 2001).

## THE LIMITATIONS OF CHILD AND ADOLESCENT MENTAL HEALTH RESEARCH

Some of the limitations of the research which explores the evidence-based interventions for children and youth experiencing mental disorders includes:

- Not enough clinical research occurs and consequently there are significant gaps in the literature base.
- Clinicians don't have the time or are unable to access the information to inform intervention planning.
- Some of the measures used are inadequate in identifying the level of psychological distress a child or young person may be experiencing. As a result they are limited to measuring changes in symptom presentation. This is partly due to the complexity of the experience of mental disorder in children and youth (Fonagy et al., 2000).
- There needs to be an increasing awareness of the influence of culture when making treatment decisions and identifying what is or isn't a good outcome (Bernal, Bonilla & Bellido, 1995, cited in Fonagy et al., 2000). Interventions and their evaluation must be considered in the cultural context of that child or young person and their family/whanau.
- There is huge variability in the quality of the research (Fonagy et al., 2000). This includes methodological shortcomings such as unrepresentative samples, inadequate follow-ups, and limited exploration of individual treatment response.
- Specific areas of evidenced-based interventions for children and youth experiencing mental disorders are more difficult to research than others, an example being pharmacological research. As Fonagy et al., (2000. p. 62) describe:

“There are specific legal and ethical issues concerning psychopharmacological research with children, particularly with regard to the use of placebos, complex consent procedures, and inherent resistances to psychopharmacological studies in children (Arnold et al., 1995; Coffey, 1995; Glantz, 1996). Ethical concerns are even greater when administering treatment without adequate knowledge of its likely effects.”

## **GENERAL INFORMATION ON THE PREVALENCE OF CHILD AND ADOLESCENT MENTAL DISORDER**

- Based on the international literature reviewed by Fonagy et al., (2000), the prevalence of mental disorder in community surveys is reported to be around 20–30% of school-age children, but this figure drops to 12–15% when only moderate to severe (clinically significant) diagnoses are considered (Fonagy et al., 2000).
- By 11 years of age, the New Zealand prevalence for any disorder is approximately 18% (Fergusson, Horwood & Lynskey, 1997). At 15 years of age, approximately 25% of young people meet DSM IV criteria for one of the main mental disorders (anxiety, mood, conduct and alcohol and drug disorders) (Fergusson & Horwood, 2001). At 18 years of age, 45% met criteria for one of these mental health concerns (Fergusson et al, 2003).
- At 15 and 18 years of age, rates for females were higher than for males (Fergusson & Horwood, 2001).
- The greatest vulnerability for developing a mental disorder occurs between ages 15 and 18 (Fergusson et al., 2003).
- The Christchurch Health and Development Study found that in their sample of 18 year olds interviewed in 1995, the relative risk of the prevalence of any mental health disorder for Māori compared with non Māori was 1.3-1.5 (Fergusson et al., 1997).
- The prevalence rates for Pacific people and children and adolescents of Asian ethnicity are not available (Ramage, Bir, Towns, Vague, Cargo & Niumata-Faleafa, 2005).
- Figures for overall prevalence are similar across cultures throughout the world although there are substantial cultural differences in the types of disorders that are most commonly found (Fonagy et al., 2000).
- Some disorders have been increasing in the past decades, for example depression (Fonagy et al., 2000).
- A high proportion of disorders are likely to persist or recur during the period of childhood and into adult life. This is dependent upon the type of disorder and the age of presentation (Fonagy et al., 2000).
- Comorbidity is very common, (Fonagy et al., 2000), including alcohol and drug disorders.
- Poor quality family, school, and community environments and poor physical health are risks for developing mental disorders in childhood, and are generally associated with poor treatment outcomes (Fonagy et al., 2000).
- There are a significant number of children and young people with relatively severe disorders who are not in contact with mental health services (Fonagy et al., 2000).

## **CULTURE, SERVICE DELIVERY AND EVIDENCE-BASED PRACTICE**

The review of the literature failed to identify specific evidence-based cultural interventions. As Sprenkle (2002, p.19) comments:

*"[There is a] need for more research regarding cultural adaptations of these treatment models as well as adaptations for individual and family differences. The demands of a more diverse culture will demand such effort. Perhaps this research thrust will address the criticism that empirically supported treatments assume a homogeneous population that rarely exists."*

In New Zealand, there has been a focus on the appropriateness of the use of specific interventions with Māori, Pacific and other ethnic groups. There is a dearth of specific research on child and youth mental health interventions. A focus on culturally appropriate interventions for children and youth is therefore required.

## **THE RANGE OF SERVICE DELIVERY**

**Note:** *These levels are not used routinely.*

**Level One:** Services that can identify mental disorder provide early intervention and refer children and young people with moderate to severe concerns:

Practice Nurses, Plunket, General Practitioners, Social Workers in Schools, School Counsellors

**Level Two:** Services that can provide assessment, intervention; and referral of children and young people with severe mental health concerns:

Paediatricians, Group Special Education

**Level Three:** Assessment and intervention for children and young people with moderate to severe mental health concerns:

Child and Adolescent Mental Health Services

**This document focuses on moderate to severe mental disorder that is within the service framework of CAMHS.**

## **FUNDAMENTAL ELEMENTS OF CAMHS SERVICE DELIVERY**

- Accessibility, seamless entrance and exit.
- Appropriate clinician-child/youth/family-whānau match.
- Comprehensive assessment, treatment planning and treatment review.
- Multi-disciplinary approach to service delivery.
- Risk management.
- Assertive clinical and business leadership: partnership model.
- Responsiveness to cultural difference.
- Consumers as partners.
- Targeted interventions using evidence-based treatment approaches.
- Seamless service delivery.
- A system of care approach (Dunnachie, 2006).

## **PART TWO:**

### **DISORDERS CURRENTLY PRESENTING IN CHILDHOOD AND ADOLESCENCE AND THE INDICATED EVIDENCE-BASED INTERVENTIONS**

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#### **HOW TO USE THIS GUIDE**

The disorders have been grouped into categories as described by Fonagy et al., (2000). These are as follows:

- Emotional Disorders
- Disruptive Behaviour Disorders
- Attention Deficit Hyperactivity Disorder
- Eating Disorders
- Addictions
- Psychotic Disorders
- Pervasive Developmental Disorders
- Tourette Disorder

Information on the above disorders will then be offered within the following areas:

- Brief Description
- Prevalence and age of onset
- Co-morbidity
- Treatment

A brief summary will complete each section and will be presented in matrix form. References will be included in the text only. Levels of intervention are described using John Weisz (2005) and The National Institute of Mental Health (NIMH, 2001) guidelines. The blank cells in the matrices represent that no specific literature was found in this area.

## **EMOTIONAL DISORDERS**

Emotional disorders constitute just under half of all mental disorders occurring in childhood and adolescence (AACAP, 1997; Esser et al., 1990; Rutter et al., 1970; Yule, 1981), and there is evidence to suggest that they may be the most common problems within each age group (Bernstein & Borchardt, 1991; Costello, 1989; Kashani & Orvaschel, 1990; McGee et al., 1990).

In this section three of the emotional disorders are covered:

- Anxiety disorder
- Post-traumatic stress disorder
- Depressive Disorders.

### **ANXIETY**

#### **Description**

Anxiety disorders in children and adolescents include the syndromes described for the adult population, so for DSM-IV the following categories can be applied to children: Generalised Anxiety Disorder (GAD), Obsessive-Compulsive Disorder (OCD), agoraphobia, panic disorder, specific phobia, social phobia, and anxiety states due to either medical disorder or substance use. The childhood emotional disorder that appeared in DSM-III-R and that has been retained is Separation Anxiety Disorder (SAD) (Fonagy et al., 2000, p105).

#### **Prevalence**

Overall figures from studies of children and adolescents from 4–20 years of age suggest that 8–12% of this age range experience one or more diagnosable anxiety disorders (Costello, 1989; Kashani & Orvaschel, 1990). Findings from the Dunedin and Christchurch longitudinal studies suggest that the prevalence of anxiety disorders increases from childhood to adolescence. Around 7% of children met criteria for any anxiety disorder at age 11, with this figure rising to just under 20% by age 18 (Fergusson et al., 1997). Anxiety disorders are equally frequent in boys and girls until adolescence, after which there is a predominance of girls (AACAP, 1997; Cohen et al., 1993; Kessler et al., 1994). Certain disorders seem to be particularly likely to be under-diagnosed and untreated, for example, OCD (Flament et al, 1988).

The evidence suggests that different anxiety disorders may present at different ages. Those with separation anxiety disorder (SAD) usually present at the youngest age, and are more frequently from families with lower socio-economic status or with single parents (AACAP, 1997; Last, Perrin, Hersen & Kazdin, 1992; Velez et al., 1989). While SAD becomes less common in the older age group, GAD becomes more frequent (Anderson et al., 1987; Westenberg, Siebelink, Warmenhoven & Treffers, 1999). Seventy-five percent of children with SAD present with school refusal (Last et al., 1987).

Obsessive Compulsive Disorder (OCD) seems to present at two stages: in the early school years and in adolescence (Swedo, Rapoport, Leonard & Lenane, 1989). Boys are more likely to present at the earlier age, girls in adolescence.

Panic Disorder: There is evidence that panic disorder is rare before puberty (Black & Robbins, 1990; Klein, Mannuzza, Chapman & Fyer, 1992). A study by Hayward et al., (1992) showed a clear relationship between onset of panic-attacks and puberty in girls, regardless of age.

Anxiety disorders are more commonly treated among children in middle to upper class families (Francis, Robbins & Grapentine, 1992; Last, Hersen, Kazdin, Finkelstein & Strauss, 1987; cited in Fonagy et al., 2000, p.106-107).

### **Comorbidity**

One third or more of children with one anxiety disorder also meet criteria for two or more anxiety disorders (Kashani & Orvaschel, 1990; Strauss & Last, 1993), and about the same proportion suffer from major depression (Bernstein & Borchardt, 1991; Strauss, Last, Hersen & Kazdin, 1988). Around 20% of children with separation anxiety disorder meet criteria for attention deficit hyperactivity disorder (ADHD) (Last et al., 1987; AACAP, 1997; Fonagy et al., 2000).

### **Treatment**

- **Psychological Therapies:**

- **Psychodynamic Psychotherapy:** Whilst widely used, there has been limited evaluation of the effectiveness of psychodynamic psychotherapy in the treatment of anxiety disorder in children and adolescents. The evaluation that has been done has suggested that more evaluation is required (Target & Fonagy, 1994; Wolpert et al., 2006). One study by Bernstein et al. (1997) suggested that psychodynamic psychotherapy that focuses on underlying fears and anxieties is often an appropriate part of treatment (AACAP, 1997).

– **Behavioural & Cognitive-Behavioural Therapies:**

- **Phobias:** Behavioural therapies are frequently the intervention of choice (Ollendick & King, 1998). For an intervention to be successful it is important to have parents involved (Ollendick & King, 1998). For younger children, interventions (e.g. desensitisation) are more successful if they occur 'in-vivo' rather than using imagery (Ollendick & King, 1998; Wolpert et al., 2006). Treatment for phobias in children and young people is more likely to be successful in children under 11 years of age (Hampe, Noble, Miller & Barrett, 1973; Miller, Barrett, Hampe & Noble, 1972). Research completed on specific phobias suggest that imaginal systematic desensitisation is more effective than no treatment but not as effective as in-vivo desensitisation (Ollendick & King, 1998). Emotive Imagery (pairings frightening situations with an exciting story involving a hero-figure, as opposed to pairing stories with relaxation), is more effective than other treatments (Cornwall & Scott, 1997; King et al., 1989). Behavioural techniques such as modelling (live, filmed, or participant types, the latter involving in-vivo exposure in addition to modelling of exposure by others, Blanchard, 1970; Ritter, 1968) and contingency management (modification of the consequences of the child's behaviour (Menzie's & Clarke, 1993) have all been found to be effective for phobias in young children. School phobia and separation anxiety disorders can be treated successfully with ungraded exposure treatment, or flooding via rapid return to school Wolpert et al., 2006). The treatment involves careful assessment and preparation of all concerned, followed by flooding, i.e. forced return to school, with escort as long as necessary (Blagg & Yule, 1984). Cognitive Behavioral Therapy (CBT) is also successful in the treatment of school phobia (King et al., 1998; Wolpert et al., 2006). An educational component (education about the nature of the phobia) may further enhance the treatment of school phobias (Last, Hansen & Franco, 1998).
- **Generalised Anxiety:** CBT has been shown to be promising in the effective treatment of generalized anxiety in children (Kane & Kendall, 1989; Wolpert et al., 2006). Kendall further demonstrated this in a group of 47 children aged 9-13 years (Kendall, 1994). In a 3.3 year follow-up, Kendall was able to show that treatment gains had been maintained (Kendall & Southam-Gerow, 1996). The inclusion of family-based CBT is likely to enhance the treatment (Barrett, 1996; Howard & Kendall, 1996). This is especially true for younger children age up to 10 years (Kendall, 1994).
- **Obsessive Compulsive Disorder (OCD):** Despite weak empirical support, CBT appears to be the psychotherapeutic treatment of choice for OCD experienced by children and adolescents (AACAP, 1998). Family therapy coupled with CBT is thought to be more effective than CBT alone. Response

prevention (thought-stopping), coupled with family therapy has also been found to be successful (De Seixas Queiroz, Motta, Pinho Madi, Sossai & Boren, 1981; Friedmann & Silvers, 1977). Medication (Clomipramine or an SSRI) is considered to optimise treatments such as CBT for children and young people with OCD (DeVeugh-Geiss et al., 1992; Flament et al., 1985; Leonard et al., 1988, March, 1999; Wolpert et al., 2006).

- **Other Anxiety Disorders: Social Phobia** Group treatment incorporating psycho-education, skill building, modelling and role-playing, cognitive restructuring and both within and between situational exposure to anxiety provoking social situations has found to be effective (Albano, 1995).
- **Medication:**
  - **Benzodiazepines:** There has been very little research on the efficacy of benzodiazepines, for anxiety symptoms in children or adolescents, although they are fairly commonly prescribed (Riddle et al., 1999).
  - **Tricyclics:** The following information has been adapted from Fonagy et al., (2000, p. 111):

The use of tricyclic medication in the treatment of school-phobia and separation anxiety has not been found to be superior to that of placebo (Berney, 1981; Bernstein, Garfinkel & Borchardt, 1990; Klein, 1992).

A serious difficulty in the use of tricyclics with children or adolescents is that they have been found to increase the (small) risk of sudden death from cardiac failure, and of long-term electrocardiographic (ECG) changes. These side effects necessitate cardiac monitoring in this age range (for a recent review, see Geller, Reising, Leonard, Riddle & Walsh, 1999).
  - **Selective Serotonin Reuptake Inhibitors (SSRIs):** The other main group of drugs that show promise in childhood anxiety disorders but have been much less extensively evaluated so far in children than in adults, are the SSRIs (reviewed by DeVane & Sallee, 1996; Emslie, Walkup, Pliszka & Ernst, 1999). They seem to produce different and probably less serious side effects than clomipramine and other tricyclics; however, SSRI's are also linked with some behavioural side effects (agitation and perhaps mania) in certain people (see Emslie et al., 1999; Wolpert et al., 2006). Recent literature has suggested that SSRI's may increase suicidality. Cheung, Emslie and Mayes (2005) have developed a set of management guidelines to maximise safe administration of these medications (see Depression section for further information).
  - **MAOIs:** There are no studies that support the use of MAOI's in the treatment of anxiety disorder for children and adolescents (Fonagy et al., 2000).

## TREATMENT MATRIX: ANXIETY DISORDERS

### AVERAGE AGE OF ONSET:

Differs depending on specific disorder:

GAD: Presentation in mid to late childhood

SAD: Youngest presentation, pre and early school age. Less common in adolescence

OCD: Both in early school years and in adolescence

Panic Disorder: Rare before puberty

DISORDER	TREATMENTS ACROSS ALL AGES, CHILD & ADOLESCENT
<b>GENERALISED ANXIETY DISORDER</b>	No Best-Supported ('well-established') Treatments. Promising ('probably efficacious') are: CBT, Family Anxiety Management, Modelling, in-vivo-exposure, Relaxation Training, Reinforced practice.
<b>OBESSIVE COMPULSIVE DISORDER</b>	No Best-Supported Treatments. Promising: SSRI's, Clomipramine: Enhanced with psychosocial therapies. CBT: Accepted for clinical use but limited studies. More effective when coupled with family therapy. Family Therapy and Response Prevention appear to be effective, but have not been adequately evaluated.
<b>AGORAPHOBIA</b>	No Best-Supported Treatments or Promising Treatments at this time
<b>PANIC DISORDER</b>	No Best-Supported Treatments. No Promising Treatments at this time.
<b>SPECIFIC PHOBIA</b>	Best-Supported are: Participant Modelling, Reinforced Practice Promising Treatments are: Systematic Desensitisation, CBT
<b>SOCIAL PHOBIA</b>	No Best-Supported or Promising Treatment at this time. Group Therapy incorporating education and cognitive strategies is accepted for clinical use although not adequately evaluated.
<b>SEPARATION ANXIETY</b>	No Best-Supported Treatments Promising Treatments are: CBT, Family Anxiety Management, In-vivo Exposure, Relaxation Training, Reinforced Practice.

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **POST TRAUMATIC STRESS DISORDER**

### **Definition**

Post Traumatic Stress Disorder (PTSD) refers to the development of specific features following exposure to a particularly severe (extreme) stressor (AACAP, 1998). The disorder is characterised by a number of features across 3 areas: re-experiencing (for example re-enacting experiences, distressing dreams of the experience, or intense distress at a symbol of the experience), avoidance (for example, avoiding any event that might bring back memories of the trauma) and increased arousal (for example, irritability, sleep disturbance and hyper-vigilance) (American Psychiatric Association, 1994). The cause is likely to be multi-factorial, and the outcome mediated by family and other supports (AACAP, 1998).

### **Prevalence**

Studies of at-risk child populations have demonstrated prevalence rates of around 3% (Garrison et al., 1995) to 34.5% (Berman et al., 1996). PTSD occurs across ethnic and cultural groups, but may be manifested in different ways (Ahmad & Mohamad, 1996; Diel et al., 1994; DiNocola, 1996; Mannson et al., 1996). The age of onset may be any age, but the manifestation of the disorder is likely to be developmentally mediated (AACAP, 1998).

### **Comorbidity**

There is a large overlap between depressive disorders and PTSD (AACAP, 1998). There is evidence of the co-existence of substance-use disorder (Brent et al., 1995; Clark et al., 1995). There is also evidence of the coexistence of anxiety disorders (Brent et al., 1995; Clark et al., 1995). It has been suggested that there is also a link between PTSD and some experiences of ADHD (Cuffe et al., 1994; Glo & Teicher, 1996). There is evidence to suggest that there may be a co-morbidity or development over time between PTSD and Borderline Personality Disorder (BPD), particularly in people who have experienced sexual abuse (Stone, 1990). BPD can not be officially diagnosed before 18 years of age (American Psychiatric Association, 1994).

### **Treatment**

There is very little empirical support for the treatment of PTSD. It has been suggested that a multi-modal approach is important with the involvement of family and communities in the treatment.

The following are the current accepted treatments:

- **Assessment:** A thorough comprehensive assessment is required prior to treatment planning. As well as a complete exploration of the trauma, there needs to be a focus on the developmental manifestations and on care and protection concerns (AACAP, 1998).
- **Psychological Therapies:**
  - **Specific Stress Management Techniques:** Stress Management Techniques such as progressive muscle relaxation, thought stopping, positive imagery and deep breathing are useful (Cohen & Mannarino, 1993; Deblinger & Heflin, 1996; Parson, 1997; Saigh et al., 1996).
  - **CBT:** There is some evidence to suggest that Trauma-focused CBT is more efficacious than other forms of therapy, especially when parents are involved in the treatment (AACAP, 1998; Wolpert et al., 2006).
  - **School-Based Grief/Trauma-Focused Psychotherapy:** School-Based Grief/Trauma-Focused Psychotherapy has been found to be effective (Goenjian et al., 1997; Wolpert et al., 2006).
  - **Massage Therapy:** Massage Therapy has been found to be an effective treatment and this is likely to be because of the muscle relaxation that occurs (Field et al., 1996; Wolpert et al., 2006).
  - **Eye Movement Desensitisation & Reprocessing (EMDR):** Whilst EMDR has proven efficacy with adults and there are current studies that may indicate that this is a promising treatment with children and adolescents (Wolpert et al., 2006).
- **Medication:** There are currently no studies that demonstrate the efficacious use of medication in the treatment of children or adolescents with PTSD (AACAP, 1998; Wolpert et al., 2006).

## TREATMENT MATRIX: POST TRAUMATIC STRESS DISORDER

**AGE OF ONSET:** Any age, developmental manifestations may occur

TREATMENT	AGE: CHILDHOOD & ADOLESCENCE
<b>SPECIFIC STRESS MANAGEMENT TECHNIQUES</b> (progressive muscle relaxation, thought stopping, positive imagery and deep breathing).	Promising, Probably Efficacious.
<b>CBT</b>	Promising, Probably Efficacious.
<b>SCHOOL-BASED GRIEF/TRAUMA FOCUSED PSYCHOTHERAPY</b>	Promising, Probably Efficacious.
<b>MASSAGE THERAPY</b>	Promising, Probably Efficacious
<b>EMDR</b>	No Evaluation Completed; Potentially promising
<b>MEDICATION</b>	No Evidence

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **DEPRESSIVE DISORDERS**

### **Definition**

Depressive disorders are partly defined by somewhat arbitrary reference points on a continuum of sadness, lethargy and pessimism (Fonagy et al., 2000). A diagnosis of major depressive disorder (MDD) in children and teenagers requires a minimum 2 week period of pervasive mood change towards sadness or irritability, and loss of interest or pleasure (APA, 1994). This needs to be a clear change in functioning, accompanied by impairment in social or other role performance. Diagnosis of major depression also requires the presence of some biological characteristics, such as loss of appetite, insomnia, reduced energy or libido in adolescents. Children tend to show more anxiety and anger, fewer vegetative symptoms and less verbalisation of hopelessness than do adults; however, the broad picture is now thought to be similar across the lifespan (AACAP, 1998). Dysthymic disorder (DD) is the other depressive syndrome to be considered here. This is by definition a chronic condition, marked by depressed and/or irritable mood, which must be present on most days, for most of the day, for at least a year. In addition, at least two other symptoms of MDD must be present (APA, 1994)

### **Prevalence**

Overall figures from epidemiological studies of children and adolescents spanning 4–20 years of age (earlier studies reviewed by Costello, 1989; e.g. Kashani & Orvaschel, 1990) suggest that both depression and dysthymia have prevalence rates of about 2% among children and 2–5% for adolescents (AACAP, 1998; Birmaher et al., 1996; Lewinsohn & Clarke, 1999). Findings in the Oregon Adolescent Depression Project show that the cumulative prevalence of MDD up to age 18 is 28%, 35% for girls and 19% for boys (Lewinsohn et al., 1993; Lewinsohn, Rohde, Klein & Seeley, 1999). Fergusson's New Zealand study identified 6.6% of their sample of 15 year olds met criteria for mood disorder. By age 18 this had increased to 22.1% (Fergusson et al., 1997). Depressive disorders are equally frequent in boys and girls until adolescence, after which (from age 14) there is a predominance of girls (approximately 2:1) (AACAP, 1998; Cohen et al., 1993; Kessler et al., 1994; Lewinsohn, Clarke & Rohde, 1994; Werry, McClellan & Chard, 1991). There is evidence from both clinic studies and population surveys that mild-moderate depressive disorder is both becoming more common, and beginning earlier (e.g. Birmaher et al., 1996; Fergusson, Horwood and Lynskey, 1997; Gershon, Hamovit, Guroff & Nurnberger, 1987; Kovacs & Gatsonis, 1989) [Section cited in Fonagy et al., (2000. p. 124)].

## **Comorbidity**

For children and adolescents with a diagnosis of major depression, it has been estimated that 40–70% have a second mental disorder, and at least 20% have three or more disorders (Birmaher et al., 1996). The most common co-morbid disorders are dysthymia and anxiety disorders, followed by disruptive disorders. Depressive disorders often develop after the other disorders are established (Biederman, Faraone & Lelon, 1995; Goodyer, Herbert, Secher & Pearson, 1997; Lewinsohn, Zinbarg, Seeley, Lewinsohn & Sack, 1997).

Conduct disorders can develop as a complication of a pre-existing depressive disorder, sometimes persisting after the mood disturbance has lifted (Kovacs, 1996; Kovacs, Paulauskas, Gatsonis & Richards, 1988). The majority of children or adolescents diagnosed with dysthymic disorder also have other diagnosable disorders: 70% develop a major depression and 50% have other disorders such as anxiety, conduct and elimination disorders, and about 15% have two or more co-morbid disorders (Ferro, Carlson, Grayson & Klein, 1994; Kovacs et al., 1994) [Section cited in Fonagy et al., (2000. p. 125)].

## **Treatment**

- **Assessment:** Comprehensive assessment is the most important tool in the diagnosis of depressive disorders, and should precede any treatment plan (AACAP, 1998).
  
- **Psychological Therapies:**
  - **Cognitive Behavioural Therapy (CBT):** The overall evidence for the effectiveness of individual CBT is inconclusive with some studies with some studies showing CBT to be no more effective than wait-list or general clinical management, but in others to be more effective than comparison treatments such as relaxation therapy and non-directive supportive therapy (Wolpert et al., 2006). CBT is less effective in children and young people where there are significant cognitive distortions. Providing longer courses of CBT (or booster sessions) in cases of non-response to a standard length of treatment seems to hasten recovery (Kroll, Harrington, Jayson, Fraser & Gowers, 1996; Clarke, Rohde, Lewinsohn, Hops & Seeley, 1999). Group CBT and non-directive therapy may be an effective treatment for mild depression (Wolpert et al., 2006).
  
  - **Social-Skills Training:** Social-skills training has received support as an intervention for depression during childhood and adolescence although it has been suggested that it is of more use when the process of recovery from depression has already commenced (Kovacs & Gatsonis, 1989). There is not

enough current evidence to suggest that social-skills training is effective in the treatment of depression.

- **Interpersonal Psychotherapy:** This psychotherapy has been adapted for adolescents: Interpersonal Psychotherapy for Adolescents (IPT-A) (Moreau, Mufson, Weissman & Klerman, 1991). The therapy focuses on the interpersonal world of the young person, with the underlying thesis that interpersonal conflicts underpin depression. The authors conducted a small, open trial using this modified, manualised approach, with promising results (Mufson et al., 1994). A more recent RCT showed a 75% improvement rate for the participants who were given IPT-A (Mufson, Weissman, Moreau & Garfinkel, 1999). A recent study comparing IPTA and CBT showed similar successful responses to treatment, whilst the IPT-A participants showed positive improvements to their self-esteem (Rosselló & Bernal, 1999). Evidence that IPT-A achieves remission is inconclusive (Wolpert et al., 2006).
- **Family Therapy:** Whilst there is hope that family therapy is a valid therapy in the treatment of depression for children and adolescence, there has been limited research to measure this to date. A study by Brent (1997) identified that systemic-behavioural family therapy may be helpful.
- **Psychodynamic Psychotherapy & Psychoanalysis:** There is little evidence to suggest that psychodynamic psychotherapy is an effective treatment for depression. One study by Target and Fonagy (1994) indicated that intensive psychotherapy (4-5 sessions per week) may have benefited adolescents involved in this study, although more studies are required to validate this.
- **Medication:** *Tricyclic antidepressants* have been found to be no better than placebo (Wolpert et al., 2006).

In recent years, the suggestion that SSRI's raises suicidality in young people has been made. A 2004 meta-analysis of randomised controlled trials (RCT's) that evaluated an SSRI versus a placebo concluded that whilst fluoxetine was favourable in the risk-benefit analysis in the treatment of depression in 5-18 year olds, this was not so for paroxetine, sertraline, citalopram and venlafaxine (Whittington, Kendall, Fonagy, Cottrell, Cotgrove & Boddington, 2004). Some studies suggest that there is a link between suicidality and the use of SSRI's, however the authors have offered guidelines for use which include thorough assessment, good education of the client and their family, and close monitoring (Cheung, Emslie & Mayes, 2005). The clinical guidelines published by the National Institute for Health and Clinical Excellence (The NICE guidelines) suggest that antidepressant medication should not be used for the treatment of children and young people with moderate to severe depression without concurrent

treatment with a psychological therapy, as well as close monitoring (National Institute for Health & Clinical Excellence, 2005). This recommendation was also highlighted in the National Institute of Mental Health Treatment for Adolescents with Depression Study (NIMH TADS) report (Emslie, Kratochvil & Vitiello, 2006).

A Cochrane review published in 2007 (Hetrick, Merry, McKenzie, Sindahl & Proctor, 2007) concluded that whilst children and young people ‘responded’ to SSRI’s with an effective reduction in the symptoms of depression, for SSRI’s other than Fluoxetine, this effect was inconsistent across studies. There was also evidence of increased suicidal ideation and suicide attempts. This however, needs to be considered alongside the increased suicidality associated with depressive illnesses (Hetrick et al., 2007).

### TREATMENT MATRIX: DEPRESSIVE DISORDERS

**AGE OF ONSET:** Whilst depression occurs in childhood, the greatest number of presentations occurs in mid-late adolescence, and in more females than males.

TREATMENT	CHILD & ADOLESCENCE
<b>IPT-A</b>	Best-Supported (Well-Established) although evidence is inconclusive re achieving remission .
<b>CBT</b>	Best-Supported (Well-Established) although recent studies suggest that further evaluation may be required.
<b>SYSTEMIC FAMILY THERAPY, OTHER FAMILY THERAPIES</b>	Promising: Needs further evaluation.
<b>MEDICATION (PSYCHOLOGICAL THERAPIES SHOULD BE CONSIDERED AS FIRST LINE OF TREATMENT)</b>	SSRI's: (Fluoxetine): Promising (Probably Efficacious, Need close monitoring).
<b>SOCIAL SKILLS-TRAINING</b>	Not well evaluated. Appears effective in recovery phase.

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **DISRUPTIVE BEHAVIOUR DISORDERS (DISORDERS OF CONDUCT)**

### **Description**

Disruptive behaviour disorders encompass children showing high rates of non-compliant, hostile and defiant behaviours, often including aggressiveness and hyperactivity (APA, 1994). In DSM-IV (APA, 1994), these behaviours are described under three broad categories: Attention Deficit Hyperactivity Disorders (ADHD), Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) (Fonagy et al., 2000). The clusters of problems include oppositional, conduct disorder and antisocial behaviours (Hinshaw & Anderson, 1996). Conduct Disorder and ODD are defined in DSM-IV. ODD must include a repetitive pattern of defiance and disobedience and a negative and hostile attitude towards authority figures of at least 6 months' duration. Conduct Disorder is defined by the violation of the basic rights of others or of major age-appropriate societal norms or rules (APA, 1994).

### **Prevalence**

Oppositional problems occur in 5-10 % of non-clinical samples (Fonagy et al., 2000; Rutter, 1996). Conduct Disorder has a prevalence of between 1.5% and 3.4% of children and youth (Bird, 1988; O'Donnell, 1985; Fergusson et al., 1993; Feehan et al., 1993; Blanz et al., 1990). Children and young people with disruptive behaviours are the largest group referred to mental health services (Reid, 1993). The prevalence of school-based disturbance of conduct (e.g. bullying) is also high (Pepler, Craig, Ziegler & Charach, 1993). The prevalence of conduct disorder/oppositional disorders in New Zealand youth is estimated to be 10.8% at age 15 years, reducing to 4.8% at age 18 (Fergusson, Horwood & Lynskey, 1997). The onset of Conduct Disorder is more commonly seen in adolescence than in childhood (Moffitt et al., 1996). This feature becomes clear when the degree of youth violent offending is considered (Audit Commission, 1996). The ratio of Conduct Disorder of boys to girls is 5:1 (Boyle et al., 1992). Other disruptive disorders thought to be related to disturbance of conduct include antisocial personality disorder or psychopathy. Among adolescent boys, those with a combination of hyperactivity, impulsivity, attention and conduct problems resemble psychopathic adults most closely (Lynam, 1998). Disturbance of conduct is a significant risk factor for substance use (Catalano & Miller, 1992; Loeber, 1988). There is a high continuity between failure in school, associated with conduct problems, and adult unemployment (AACAP, 1997). Thus the long-term outcome of conduct disturbances is poor. Adapted from Fonagy et al., (2000, p.41).

## **Comorbidity**

Conduct problems are associated with other disruptive behaviour problems (including ADHD, delinquency and substance misuse) as well as certain internalising disorders (particularly depression and anxiety), and specific developmental disorders (AACAP, 1997).

## **Treatment**

- **Psychological Therapies for Children with Disruptive Behaviour Disorder:** A multi-modal approach to treatment is recommended (AACAP, 1997; Wolpert et al., 2006).
  - **Family Based Interventions (Parent Training):** Parent Training programmes are proving effective in the treatment of disruptive behaviour disorders (Fonagy et al., 2000; Wolpert et al. 2006). The younger the child the greater the opportunity for success (under 10 years). Cultural considerations must be taken into account in the delivery of these programmes. Parent Training models are based in social learning theory and on the assumption that many conduct behaviours, including oppositional behaviour and mild forms of aggression, reflect parenting difficulties (Kazdin, 1995; Miller & Prinz, 1990; Patterson, 1982). Interventions tend to be conducted with the parents with limited therapist-child contact. Parents are encouraged to refocus on positive rather than negative behaviours. The programmes also include support from the clinician with role playing, behavioural rehearsal and structured homework exercises. The effectiveness of behavioural parent training in producing short-term changes in parent-child behaviour has been established since the mid-1970s (O'Dell, 1974). It has not been established that the changes can be generalised to other non-clinical settings post-treatment (Estrada & Pinsof, 1995; Serketich & Dumas, 1996; Shadish et al., 1993). Programmes have focused on non-compliance in 3–8 year-olds as the target of their intervention. There are a number of research groups working with slight variations of this approach. The four most significant parenting programmes come from Forehand and McMahon (1981), Webster-Stratton (1996), the Oregon Social Learning Center (Patterson & Forgatch, 1995) and Eyberg (1995). All these programs are clearly described, well-manualised treatments.  
  
**\*More detailed information is included in ADDENDUM A at the end of this document.**
  - **Psychodynamic Therapies:** The evidence suggests that the use of psychodynamic therapy for children with disruptive behaviour disorders is

unfavourable when compared with other treatment approaches (Wolpert et al., 2006).

- **Social Skills & Anger Coping Skills Training:** The increasing prominence of models of conduct disturbance which emphasise social information processing deficits (Coie & Dodge, 1998; Kendall & MacDonald, 1993) have generated a range of treatment approaches which focus on the distorted appraisals of social events by children with conduct problems. The programmes focus on modifying and expanding the child's interpersonal appraisal processes so that the child develops a more sophisticated understanding of beliefs and desires in others, as well as improving the child's capacity to regulate his or her own emotional responses.

Another programme that has been subjected to outcome evaluation is Lochman and colleagues' 'Coping Power', a school based intervention (Lochman & Wells, 1996). The programme is administered during the school day to primary school children with conduct problems. It is a well manualised, well structured 33 session programme.

The available evidence suggests that the use of social-skills programmes alone are unlikely to be effective in the treatment of severe behavioural disorders (Conduct Disorder), however they may be more effective when used in combination with other treatments, e.g. cognitive-behavioural approaches (Wolpert et al., 2006).

**\*More detailed information is included in ADDENDUM B at the end of this document.**

- **Problem-Solving Skills Training (PSST):** PSST assists the young person to develop interpersonal, cognitive problem-solving skills. In this approach, the therapist explores the habitual ways in which children tend to address interpersonal situations from a cognitive perspective Spivak and Shure (1974; 1976; 1978).

The model emphasises skills for problem identification, solution generation, solution selection and enactment (Kazdin, 1996). The treatments focus on how children think about and deal with the social situations they experience. Children with conduct problems receive in vivo practice and then learn to apply the skills to academic tasks, impersonal and interpersonal problems. PSST is an individual treatment normally carried out in 20 sessions.

The model has become an integrated component of some Parent-Training Models e.g. Webster-Stratton.

The evidence supports the integration of this model as being more effective. The evidence also suggests that young people with severe Conduct Disorder are likely not to complete the programme (Kazdin, Mazurick & Siegel, 1994). It does however seem to be the treatment of choice for conduct problems in school aged children 8-12 (Wolpert et al, 2006).

- **Integrated Cognitive Therapy:** This describes the development of intervention packages based on the combining of a number of treatment approaches.

For example, Philip Kendall and his co-workers (Kendall & Braswell, 1985; Kendall & Braswell, 1993) have integrated a number of elements of previously discussed programmes in a well-manualised 20-session cognitive-behavioural treatment programme for impulsive children.

Another example of an integrated cognitive model is the Peer Coping Skills (PCS) training programme (Blechman, Prinz & Dumas, 1995). The programme is school-based and is designed to support prosocial coping by integrating low and high risk groups in a group-information exchange in which children are encouraged to share information about controllable and uncontrollable challenges in their lives. The focus is on the sharing of thoughts and feelings and in exchanging and sharing discussion on coping mechanisms (Blechman, Dumas & Prinz, 1994).

Integrated cognitive programs are clearly well justified, both theoretically (given the wide range of problems which conduct disordered children present with) and empirically (given that a wide range of approaches appear to be only partially effective). To date, approaches that integrate social cognitive-behavioural strategies have not been shown to be superior, in terms of adaptability or effectiveness, to singular approaches, although they may be particularly relevant to some children/young people for whom other treatments have not worked (Fonagy et al., 2000).

- **Primary & Intermediate School-Based Interventions:** Treatment of conduct problems in the classroom has not received as much attention as interventions for conduct problems in the home. Classroom intervention programs reviewed by Little and Hudson (1998) are diverse, and many lack empirical support, while others are not consistent with intervention strategies used in the home setting.

In general, strong positive leadership, high student expectations, close monitoring of students, good opportunities to engage in school life and take on responsibility, well-functioning incentive, reward and consequence systems, high levels of parental involvement, an academic emphasis and a focus on learning are factors associated with schools with lower levels of problem behaviour (Mortimore, 1995; Reynolds, Sammons, Stoll, Barber & Hillman, 1996).

- **Modifying Teacher Behaviour:** Studies have demonstrated that changing the social behaviour of the teacher on its own is unlikely to be effective for children who meet criteria for ODD or Conduct Disorder (Little & Hudson, 1998).
- **Contingency Management in the Classroom:** These Behavioural programmes are based on social learning principles, some with an emphasis on decreasing disruptive behaviour (CLASS) and others on reducing aggression with peers (RECESS). A positive evaluation of the CLASS program was achieved in a follow up study (Walker, Hops & Greenwood, 1984). There is evidence for both these effects being maintained at 1-year follow-up. Programmes where parents are involved in offering reinforcement are also effective (Kahle & Kelley, 1994). This program can also be taught relatively easily, via videotape instructions if need be (Forgatch & Ramsey, 1994).  
In summary, classroom based behaviour interventions are commonly used by teachers. Their effectiveness in managing classroom behaviour problems via classroom based interventions is beyond doubt. How effective they might be as components of therapeutic work with ODD or Conduct Disorder children is unknown.
- **Primary & Intermediate School-Wide Programmes:** School-wide programmes with a cognitive focus such as Life Skills Training (LST) are aimed at fostering social resistance skills, decision making skills, anxiety coping skills and self-directed behaviour change to prevent substance abuse (Botvin, 1990; Botvin, Baker, Renick, Filazzola & Botvin, 1984). The LST program focuses on reducing the disinhibition effects on antisocial behaviour which social group and peer group models can generate. The results suggest a reduction in the use of cigarettes, alcohol and marijuana; the use of these substances correlates highly with conduct disturbance.
- **Psychosocial Interventions in Adolescence:** Cognitive-behavioural methods appear to have greatest promise in reducing antisocial behaviour in adolescents (Vennard, Sugg & Hedderman, 1997). More specifically, treatment approaches which are active, participatory, problem-solving, and aimed at the genesis of the offending behaviour, of sufficient intensity and duration and rigorously administered, were those most likely to be successful.

Punitive programmes do not work (Bishop, Frazier, Lanza-Kaduce & Winner, 1996).

Innovative programmes that include reparation and education (for example programmes that target bullying and focus on the attainment of life-skills) and are

intensive look very promising but as yet have been poorly evaluated (Fonagy et al., 2000).

- **Family Based Treatments in Adolescence:** Family based treatments in adolescence appears to be less successful on account of the developmental change with adolescents responding more to their peers, plus the severity of their symptoms of Conduct Disorder (Allen & Land, 1999; Elliott et al., 1988).

Considering the available evidence, it appears that parent training is not particularly effective as an intervention in adolescence.

Severe and chronic Conduct Disorder appears to require more intrusive treatment approaches. It seems that behaviour patterns are too well established by adolescence for the young person to respond to changes in the management or behaviour contingencies deployed by parents alone. The systems established within the families of conduct disordered adolescents over years of interaction may be too deeply ingrained in the parents' behaviour to be shifted by a relatively brief intervention.

- **Functional Family Therapy (FFT)** aims to achieve a change in patterns of interaction and communication, in a manner that engenders adaptive family functioning. The formulation is based on social learning concepts, with a focus on specific stimuli and responses which have the power to produce change.

The current FFT approach consists of several treatment components (Alexander, Waldron, Newberry & Liddle, 1988). Initially, the blaming attributions prevalent in the families of behaviourally disordered adolescents are identified. The behavioural, cognitive and emotional expectations, inappropriate attributions and systemic processes in need of change are delineated and addressed using predominantly cognitive methods.

FFT appears to have clinically significant and lasting effects on recidivism. In contrast to parent training, which traditionally does not involve the adolescent in directly addressing the maladaptive cognitive and communication patterns in such families. The framework of social behaviour theory appears to empower the family to reduce disordered behaviour in these adolescents (Wolpert et al., 2006).

- **Structural Family Therapy** may be a positive intervention for adolescence but not for children with Conduct Disorder (Szapocznik & Kurtines, 1989; Szapocznik, Kurtines, Santisteban & Rio, 1990; Szapocznik et al., 1989).

– **Multi Systemic Therapy (MST)**

MST is the most promising intervention for serious young offenders (Borduin et al., 1995; Wolpert et al., 2006). This approach fully recognises the multi-determined nature of serious antisocial behaviour (Hawkins et al., 1992; Offord et al., 1992). The treatment makes use of multiple interventions, in combinations indicated by the clinical picture. The constituent treatments include techniques from systemic and structural family therapy (e.g. joining, reframing, enactment, paradox, the assignment of specific tasks), parent training, marital therapy, supportive therapy related to interpersonal problems, social skills components, social perspective training, behavioural methods (e.g. contingency contracting) and cognitive therapy techniques (e.g. self-instructional training), as well as case management with the therapist acting as an advocate to outside agencies.

MST also appears promising in the treatment of substance abusing or substance dependent delinquents (Borduin, 1999). A particular strength of MST is the relatively low drop-out rate, which are generally substantial in delinquent populations (Henggeler, Pickrel, Brondino & Crouch, 1996).

– **Adolescent Oriented Programmes:** Meta-analytic reviews indicate that reoffending rates are most likely to be reduced by multimodal, behavioural, skills-oriented treatment programmes, but largest effect sizes are normally observed in outcome measures which are not closely related to reoffending rates (e.g. academic performance). The success of these programmes can therefore not be measured by a reduction in offending alone.

- **Social & Problem Skills Training:** Derived from CBT (Tate, Reppucci & Mulvey, 1995). In view of the far greater intensity of other programmes which have proved to be effective for this group, (e.g. MST), it is likely that social skills based approaches have not been administered intensely enough to generate clinically significant outcomes.
- **Anger Management:** Given the popularity of this approach in clinical settings, the empirical weakness of the treatment is somewhat surprising. On the basis of the evidence available we have to conclude that the effectiveness of anger control programs is not yet demonstrated and more research on the many and varied programmes is required. It is likely that anger, as a target for intervention, is not sufficiently central to problems of aggression to be an appropriate goal on its own (Fonagy et al., 2000).
- **Training in Moral Reasoning:** In general, while programmes are successful in improving moral reasoning in these young people, a reduction in conduct disturbance does not necessarily follow (Gibbs, Arnold, Ahlborn & Cheesman, 1984; Power, Higgins & Kohlberg, 1989).

- **Multi-Component Packages:** Several attempts have been made to address skills and cognitive deficits in behaviourally disordered youth at a number of levels within a single programme. A number of such programs exist but few have been subjected to rigorous evaluation. Multicomponent treatments are more likely to be effective for serious and chronic disorders such as Conduct Disorder (Fonagy et al., 2000).
- **School-Based Programmes:** Alternative education programmes have small positive effects on school performance, attitude to school and self-esteem, but none on behaviour (Farrington, 1992; Farrington, Loeber, Stouthamer-Loeber, Van Kammen & Schmidt, 1996; Loeber, Stouthamer-Loeber, Van Kammen, & Farrington, 1991).
- **Family Therapy as Community Based Intervention:** The Florida study unequivocally demonstrated that family therapy is a promising intervention in community family integration and reunification programmes and its effective implementation, population-wide, may be associated with important therapeutic gains (Nugent, Carpenter & Parks, 1993).
- **Community Case-Management:** There are numerous other community-based programs aimed at reinforcing mental health provision within the criminal justice system. A good example is the New York based Mobile Mental Health Teams program (Fagan, 1991; Glisson, 1994), where mental health professionals travel in mobile units to justice facilities at all levels of security. Unfortunately, although these programs are costly, as well as imaginative, they have not in general been evaluated in experimental trials. In particular, case management approaches which simply refer clients to existing services may fail because of the relative lack of effectiveness of these community based programs (Weisz et al., 1995).
- **Group Treatments:** Group treatments of conduct disordered adolescents appear to carry a risk of worsening rather than improving the individual's behaviour problems.

In view of the large number of therapeutic and treatment programs which are introduced in communities, particularly in North America, and given the equivocal findings of many studies, there is an urgent need to evaluate these different treatment approaches. Too little is known, not only about which community-wide initiatives work, but also about what methods of implementing such programs are effective.

- **Teaching Family Model:** This model has been widely used in the States and consists of specific training for caregivers of family homes (Kirigin, 1996). There is limited evidence that this approach leads to a reduction in disruptive behaviour.
- **Treatment (Therapeutic) Foster Care:** In TFC, community families are recruited and trained to provide placements for children as an alternative to group homes (Chamberlain & Moore, 1998). Therapeutic foster care for children with chronic delinquency has been shown to be relatively effective in reducing recidivism rate (Reddy & Pfeiffer, 1997; Wolpert et al., 2006). Given sufficient support and direction, the change of home environment can clearly be used to substantial therapeutic advantage.
- **Partial Hospitalisation:** The current evidence for partial hospitalisation is equivocal. While some studies suggest that partial hospitalisation may be helpful, the treatments are not specified with sufficient clarity to permit replication. In particular, the observation that poor parental cooperation and greater symptom severity are associated with worse outcome suggests this may not be the most suitable approach for the families who need such interventions most. The optimal partial hospitalisation approach remains to be specified.
- **Medication:**
  - **Stimulants:** On balance, there is consistent evidence to support the use of methylphenidate in children with a comorbid ADHD and ODD/CD diagnosis (Hinshaw, Henker, Whalen, Erhardt & Dunnington, 1989; Gadow, Nolan, Sverd, Sprafkin & Paolicelli, 1990; Kaplan, Busner, Kupietz, Wassermann & Segal, 1990; Wolpert et al., 2006).  
Studies of the effect of stimulant medication on children referred for a primary diagnosis of conduct disorder are fewer and confounded by the problems of comorbidity and intercurrent treatments.
  - **Combination Treatments:** Combinations of psychosocial and stimulant treatments have been tried and there are some indications that the two in combination may have broader and longer-lasting effects than either therapy alone.  
Evidence on combination treatments is equivocal. While long-term follow-ups suggest that the effect of psychosocial treatments may be enhanced by stimulant medication, other studies find no evidence for this. At this time, there is no clear indication as to which stimulant may be most effective for a particular child (Stoewe et al., 1995).

- **Lithium:** In view of the dangers associated with the use of lithium and significant side effects such as weight gain and tremor and the need for regular monitoring of blood levels. Lithium should only be considered with very cooperative families where other treatments have failed (Werry, 1994).
- **Clonidine:** Further double-blind controlled studies will be required before an evidence base for the use of clonidine is established (Fonagy et al., 2000; Wolpert et al., 2006).
- **Anti-Convulsants For Example, Carbamazepine:** Recent studies do not support the use of anti-convulsants to reduce aggressive behaviour (Fonagy et al., 2000; Wolpert et al., 2006).
- **Neuroleptics:** Traditional neuroleptics appear to be effective in reducing aggressiveness but these effects are associated with sedation and interference with learning as well as more severe side effects (Greenhill, Solomon, Pleak & Ambrosini, 1985).
- **Atypical Anti-psychotics:** Atypical anti-psychotics (for example risperidone) are showing promise in the reduction of aggressiveness and are less likely to be associated with unwanted effects although weight gain may prove to be a problem (Findling et al., 2000; Wolpert et al., 2006).
- **SSRI's:** Anti-depressants have not yet been demonstrated to be helpful in the treatment of ODD/CD symptoms (Constantino, Liberman & Kincaid, 1997).

In summary, medication cannot be justified as the first line of treatment for conduct problems. A diagnosis-based approach, which defines primary or co-morbid mental disorders associated with aggression, should guide the pharmacological treatment of conduct disorder.

## TREATMENT MATRIX: DISRUPTIVE BEHAVIOUR DISORDER

**AGE OF ONSET:** Throughout development. Conduct disorder (CD) more commonly emerges in adolescence.

TREATMENT	3-6 YRS	7-12 YRS	13-17 YRS
<b>PARENT MANAGEMENT TRAINING PROGRAMMES (PMT)</b>	Webster- Stratton: (Incredible Years- Best Supported: Well-Established).	Webster Stratton (Incredible Years- (Best Supported for 7-8 years of age Over 8 years: Add other therapy to address specific concerns e.g. marital, family, cognitive therapy (mother), cognitive therapy (child).	Not supported for severe CD.
<b>PSYCHODYNAMIC PSYCHOTHERAPY</b>	Not supported by evidence.	No t supported by evidence.	Not Supported by Evidence.
<b>PROBLEM SOLVING SKILLS TREATMENT (PSST)</b>	Promising: When Integrated into Parent Training Programmes.	Best supported: When Integrated into Parent Training Programmes.	Not supported by evidence. Young People with CD unlikely to complete programme.
<b>INTEGRATED COGNITIVE THERAPY</b>		Best supported.	Promising, probably efficacious.
<b>SCHOOL BASED INTERVENTIONS</b>	Best-supported for reducing problem behaviours with positive teacher effects and high parental involvement.	Best-Supported for reducing problem behaviours with positive teacher effects and high parental involvement.	Positive effects on school performance, limited effects on severe behaviours.
<b>FUNCTIONAL-FAMILY THERAPY</b>			Best supported Family Treatment
<b>MST</b>		Promising : Probably efficacious for youth offenders	Promising , probably efficacious for youth.
<b>GROUP TREATMENTS</b>	Not supported by evidence: Not recommended.	Not supported by evidence: Not recommended.	Not supported by evidence: Not recommended for conduct disorder.
<b>COMMUNITY CASE-MANAGEMENT</b>			Not adequately evaluated
<b>ANGER MANAGEMENT</b>			Not supported by evidence. Little effect on its own.
<b>COMBINED TREATMENTS</b>	Promising: Probably efficacious.	Promising: Probably efficacious.	Promising: Probably efficacious.
<b>THERAPEUTIC FOSTER CARE</b>		Promising: Probably efficacious.	Promising: Probably efficacious.
<b>MEDICATION</b>		Limited support for use other than for co-morbidities e.g. Stimulants for ADHD. Some evidence for Resperidone for CD.	Limited support for use other than for co-morbidities e.g. Stimulants for ADHD. Some evidence for Resperidone for CD.

**N.B** The blank cells in the matrices represent that no specific literature was found in this area.

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD)**

### **Description**

The characteristic features of this disorder are reduced levels of concentration or attention, impulsivity and over-activity or restlessness. There is no clear cut-off between extremes of normality and truly abnormal degrees of these behaviours.

The DSM-IV schedule describes three types of ADHD: Predominantly inattentive, predominantly hyperactive, and combined (both sets of symptoms). Six or more symptoms are required for each symptom group. At least some symptoms must have been present before the age of seven years and must have persisted for longer than 6 months (Fonagy et al., 2000).

### **Prevalence**

The American Psychiatric Association (1994) estimates the rate in school-age children 5-18 years to be between 3% and 5%. Studies of the prevalence of the diagnosis of ADHD have found the prevalence in children to be in the range of 4.2% to 12% (Anderson, Williams, McGee & Silva, 1987; August, Ostrander & Bloomquist, 1992; Barbaresi et al, 2002; Bergeron, Valla & Breton, 1992; Bird et al., 1988; Esser, Schmidt & Woerner, 1990; Rowland et al, 2002; Szatmari, Offord & Boyle, 1989).

The prevalence of ADHD in adolescents is in the range of 1.5% to 5% (Bergeron et al., 1992; Esser et al., 1990; Kashani et al., 1987b; Lewinsohn, Hops, Roberts, Seeley & Andrews, 1993a; McGee et al., 1990; Szatmari et al., 1989).

ADHD is thought to occur much more frequently in males; a ratio of 3:1 from population-based studies (Szatmari et al., 1989).

### **Comorbidity**

Biederman and colleagues (1991) have recently reviewed the literature and reported that the comorbidity with this disorder is high: 30–50% of ADHD children have comorbid conduct or oppositional disorders, 15–75% have a mood disorder and 25% an anxiety disorder. Jensen et al. (2001) found the rate of comorbidity for ODD to be 40%.

There is a suggestion in the literature that the type of comorbid problem varies between ADD and ADHD. Those with hyperactivity are more likely to have a comorbid conduct disorder and those without hyperactivity are more at risk of internalising symptoms such as anxiety and depression (Barkley, DuPaul & McMurray, 1990; Cantwell & Baker, 1992). Little is known about the differences in response to medication or outcome. Further research is clearly required in this area.

Several authors have reported that 50% of children with attention deficit disorders have concurrent speech or language impairments (Love & Thompson, 1988; Pliszka et al., 1999). Similar numbers go on to have reading and writing difficulties. Visuomotor problems and clumsiness are also common (Losse et al., 1991; Taylor et al., 1991). Hallgren and colleagues (1993) found that the visual-motor problems persisted into adolescence and placed the young person at higher risk of accidents than the control group.

Taylor and colleagues (1991) similarly report a higher rate of accidents in pervasively hyperactive youngsters. Richters and colleagues (1995) report that 10–25% of ADHD children have comorbid learning disorders.

Many authors have suggested that the child's ADHD and other clinically relevant child characteristics contribute to the high level of stress described by parents of these children (Anastopoulos, Guevremont, Shelton & DuPaul, 1992; Befera & Barkley, 1985). The level of stress has been found to be significantly higher for this group of parents compared to parents of normal controls. It has been suggested that increased stress levels can be attributed to the poor compliance of these children and the increased tendency to become involved in conflict in all aspects of their lives (Barkley, Anastopoulos, Guevremont & Fletcher, 1991; Barkley, Fischer, Edelbrock & Smallish, 1991).

In summary 80% of school-age children will have the same diagnosis 5 years later or in adolescence. Up to 65% will have the disorder persisting into adulthood (Weiss & Hechtman, 1993). At least one-third will continue with a conduct disorder and will have increased rates of substance abuse in adolescence, with problems persisting into adulthood in the form of trouble with the police and personality disorder. The factors found in childhood to be the most highly predictive of a poor outcome include a family history of ADHD or hyperkinesis, psychosocial adversity and comorbidity with conduct, mood and anxiety disorders (Biederman et al., 1996).

## **Treatment**

- **Psychological Therapies:** The most compelling evidence for psychological treatment is parent training in combination with behavioural therapy with the child.
  - **Exclusion Diets:** There is no good evidence that strict exclusion diets are beneficial in the majority of children with ADHD. However, if parents have observed a behavioural deterioration in response to certain substances, these should be avoided (Fonagy et al., 2000).
  - **Dietary Supplements:** Supplementation with Omega-3 and Omega-6 fatty acids has no effect on motor skills on children with coordination difficulties, however

- has been shown to have a positive effect on reading and spelling and ADHD related behaviours (Wolpert et al., 2006).
- **Behaviour Therapy:** Behaviour therapy has been shown to be more effective than no treatment controls and contributes to a reduction in disruptive behaviour (Wolpert et al., 2006)
  - Behaviour therapy on its own is less effective than stimulant medication, but it can prevent a need for higher doses of medication.
  - **Cognitive-Behavioural Therapies:** Cognitive-behavioural therapy appears to be less effective than medication in treating the primary symptoms of ADHD. This approach has no advantages over behavioural therapy in relation to academic performance (AACAP Official Action, 1997; Abikoff, 1991).
  - **Parent Training:** Parent training is as effective as behavioural therapy. Parent training is effective in improving children's compliance with instructions and improving parental self-esteem and reduces parental stress but not all families are able to persist with the approach (Fonagy et al., 2000; Wolpert et al., 2006).
  - **Social Skills Training:** There is no evidence that social skills intervention leads to an improvement in poor relationships (Cousins & Weiss, 1993; Wolpert et al., 2006).
  - **Multimodal Treatments:** Multimodal treatments have not yet consistently demonstrated superiority but there are a number of trials in progress (Richters et al., 1995).
  - **Psychodynamic & Systemic Therapies:** There is no evidence either for or against the effectiveness of systemic or psychodynamic therapy (Fonagy et al., 2000; Wolpert et al., 2006).
  - **Consultation Programmes:** Consultation with schools and teachers by mental health professionals is crucial. Examples of people for whom these Consultation programmes should be made available are paediatricians, school counsellors and primary care health professionals (Fonagy et al., 2000).

- **Medication**

- **Psycho-stimulants:** The stimulants, as they are known, are the most frequently prescribed drugs in ADHD and have been shown to be effective in the control of hyperactive and aggressive behaviour in these children (AACAP, 2005; Fonagy et al., 2000; Wolpert et al., 2006).  
The available stimulants are methylphenidate and dexamphetamine. Both are fast acting drugs which are rapidly absorbed and have an onset within the first hour. The effect lasts for up to 4 hours (Fonagy et al., 2000; Wolpert et al.,

2006). There are also longer-acting versions of these medications available (AACAP, 2005).

Stimulants interact with catecholaminergic neurones and affect many areas of the Central Nervous System (Zametkin & Rapaport, 1987).

While we know that methylphenidate and other medications are effective, it is less clear for how long treatment should continue. There is also a lack of long-term outcome studies (Fonagy et al., 2000).

Seventy-five percent of children with ADHD show normalisation of inattention, hyperactivity and impulsivity when treated with stimulants. It is not possible to predict with certainty who will show a good response. Attention and output during academic tasks improve by 70% with stimulant medication but efficiency and accuracy show approximately 50% improvement. Prosocial behaviours do not improve (Porrino et al., 1988; Abikoff & Gittleman, 1985; Biederman et al., 2005; Taylor et al., 1987; Pelham et al., 1990; Hinshaw, 1991; DuPaul & Rapport, 1993; Wilkinson, 1995). Stimulants are the best supported treatment for ADHD.

Nine randomised controlled studies have assessed the response of pre-schoolers to medication (Connor, 2002). They show that children of this age respond positively to stimulant medication (Barkley, 1988; Barkley, Karlsson, Strzelecki, & Murphy, 1984; Mayes, Crites, Bixler, Humphrey, & Mattison, 1994; Musten, Firestone, Pisterman, Bennett, & Mercer, 1997; Schleifer et al., 1975). These medications are widely used in pre-schoolers (AACAP, 2005).

The outcome of stimulant treatment of ADHD is still uncertain. It does appear, however, that treatment is preferable to no treatment, although children with ADHD treated with stimulants do not achieve as much as non-affected individuals long-term, probably because there is too much to catch up.

In the case of comorbidity: Young people with comorbid conduct disorder show 70% improvement in aggressive behaviours when treated with stimulants (Spencer et al., 1996; Wolpert et al., 2006). Comorbid anxiety and depression show only 50% improvement (DuPaul, Barkley, & McMurray, 1994; Pliszka, 1989; Taylor et al., 1987).

- **Tricyclics:** Tricyclic antidepressants have been shown to be beneficial in the treatment of the primary symptoms of ADHD in 70% of children of all ages (Spencer, 1996; Wolpert et al., 2006). Although children with 'pure' ADHD are likely to show the most improvement with stimulant treatment, those with comorbid depression, anxiety or aggression also respond (Biederman, Baldessarini, Wright, Keenan & Faraone, 1993).

When comorbid anxiety and/or depression gets worse with stimulant therapy, it may be preferable to use a tricyclic antidepressant. Tricyclics may also be indicated when stimulant treatment are not indicated (Fonagy & Target, 2005).

Prior to commencing treatment with this group of drugs, pulse, blood pressure and an electrocardiogram should be undertaken. They are also required regularly during treatment, and with each subsequent dose increase (Fonagy et al., 2000).

- **Non-Tricyclic Anti-Depressants:** There have been few studies of treatment with non-tricyclic antidepressants in ADHD and therefore it is not possible to comment on their use at this stage, other than to say that they are worth consideration if stimulants and tricyclic antidepressants are contraindicated (Fonagy et al., 2000).

Atomoxetine is a noradrenergic reuptake inhibitor that has gained recent favour and has a proven efficacy in recent trials, although is not considered to be as effective as stimulant medication (Michelson et al., 2001). There is evidence that this medication may be useful in the treatment of ADHD with co-morbid anxiety (Abikoff et al., 2005) and where there is comorbid substance-abuse (AACAP, 2005). Recent reports suggest liver complications may be a rare side-effect (Wolpert et al., 2006).

- **Clonidine:** In a review of the use of clonidine in ADHD with comorbid tics, Hunt et al (1990) suggests that it is useful in those with comorbid tic disorders, extreme over-activity and hyper arousal, oppositional or conduct symptoms and poor response to stimulants (Wolpert et al., 2006).

Connor and Colleagues (1999) conducted a meta-analysis of the studies re Clonidine use. Their findings support the impression from clinical experience that they are less effective than stimulants and should be considered as a second-line treatment as effective as tricyclics.

Another important finding is that clonidine was significantly more effective in the ADHD alone children than in those with a comorbid tic disorder (Connor et al., 1999).

- **Carbamazepine:** Silva and colleagues (1996) have conducted a meta-analysis of carbamazepine use in ADHD. They found reports of seven open studies involving a total of 189 patients and three double-blind studies including a total of 53 patients. Overall, 71% of those treated with carbamazepine in the controlled studies showed significant improvement compared with 26% of those treated with placebo. The side-effect profile is significant, e.g. leucopenia.

- **Anti-Psychotics:** These drugs should only be resorted to if all the above mentioned groups of drugs have been tried and the child is extremely disturbed (Fonagy et al., 2000). Age-related considerations would also be important.

## TREATMENT MATRIX: ATTENTION DEFICIT HYPERACTIVITY DISORDER

AGE OF ONSET: Childhood

TREATMENT	AGE: CHILD	ADOLESCENT
<b>STIMULANTS: METHYLPHENIDATE AND DEXAMPHETAMINE</b>	Best-Supported treatment for ADHD. Effective for control of hyperactivity and aggression. Effective for comorbid Conduct Disorder. Less Effective for comorbid depression and anxiety.	Best-Supported treatment for ADHD Effective for treatment of hyperactivity and aggression. Effective for comorbid Conduct Disorder. Less effective for comorbid depression and anxiety.
<b>TRI-CYCLIC ANTI-DEPRESSANTS</b>	Promising, Consider after stimulants. Beneficial for treatment of primary symptoms. Beneficial as alternative treatment to stimulants if co-morbidities e.g. depression and anxiety are worsened by stimulant medication.	Promising, Consider after stimulants. Beneficial for treatment of primary symptoms. Beneficial as alternative treatment to stimulants if co-morbidities e.g. depression and anxiety are worsened by stimulant medication.
<b>NON-TRICYCLIC ANTI-DEPRESSANTS (E.G. ATOMOXETINE)</b>	Promising: Consider after stimulants.	Promising: consider after stimulants.
<b>CLONIDINE</b>	Promising. Not as effective as stimulants As effective as tricyclics: Therefore to be considered after stimulant medications. Some evidence of their use with comorbid tic disorder.	Promising. Not as effective as stimulants As effective as tricyclics. Some evidence of their use with comorbid tic disorder.
<b>CARBEMAZEPINE</b>	Promising. Useful to consider after stimulant treatment. Monitoring for side-effects is important (leucopenia).	Useful to consider after stimulant treatment. Monitoring for side-effects is important (leucopenia).
<b>ANTI-PSYCHOTICS</b>	Not recommended unless all other meds have been tried and child is very disturbed.	Not recommended unless all other meds have been tried and young person is very disturbed.
<b>EXCLUSION DIETS</b>	No strong evidence that excluding parts of diet is useful. If parent reports that specific exclusions have been useful this should be encouraged Consider practicalities of maintaining restrictive diet over time. Including omega 3 and 6 has been found to be promising in the treatment of some ADHD related difficulties.	No strong evidence that excluding parts of diet is useful. If parent reports that specific exclusions have been useful this should be encouraged. Consider practicalities of maintaining restrictive diet over time.
<b>PSYCHOLOGICAL TREATMENTS: BEHAVIOUR THERAPY</b>	Best-supported psycho-social treatment- Less effective than stimulant meds but may mean a reduced dose is possible	Best-supported psycho-social treatment- Less effective than stimulant meds but may mean a reduced dose is possible

TREATMENT	AGE: CHILD	ADOLESCENT
<b>PARENT TRAINING</b>	Best-Supported treatment: As effective as behavioural treatment	Best-supported treatment: As effective as behavioural treatment
<b>MULTI-MODAL</b>	Promising but needs further evidence	Promising but needs further evidence
<b>COGNITIVE BEHAVIOURAL THERAPY</b>	No advantages over behavioural alone	No advantages over behavioural alone
<b>SYSTEMIC AND PSYCHODYNAMIC</b>	No evidence	No evidence
<b>SOCIAL SKILLS TRAINING</b>	No clear evidence	No clear evidence

#### **LEVELS OF INTERVENTION (See page 8 for detail)**

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## EATING DISORDERS

### Description

The DSM-IV (APA, 1994) recognises two main categories of eating disorder as follows:

- **Anorexia Nervosa (AN):** is characterised by a deliberate refusal to maintain body weight above a level that is 15% below that expected for the individual's age and height.
- **Bulimia Nervosa (BN):** is characterised by recurrent episodes of binge eating with a feeling of lack of control over eating behaviour during binges, and excessive dieting and exercise, with the use of large doses of appetite suppressants, laxatives and/or diuretics in order to reduce weight, and self-induced vomiting (APA, 1994)

### Prevalence

Fombonne (1995) calculated a median prevalence rate for eating disorders the 15 to 20 year age group, as 1.2-1.4 per 1000. This figure relates essentially to young people in the Western developed world. On the basis of further analyses, Fombonne was unable to find convincing evidence to suggest that rates have been increasing over the past 50 years.

Both clinic and survey data show rates for eating disorders that are consistently higher for late adolescent girls. In adolescents and young adults it is generally considered that about 5–10% of cases occur in males (Barry & Lippman, 1990). In children, however, a number of studies have reported that between 19–30% of cases have been in boys (Bryant-Waugh, 1993; Fosson, Knibbs, Bryant-Waugh & Lask, 1987; Hawley, 1985; Higgs, Goodyer & Birch, 1989; Jacobs & Isaacs, 1986).

The distribution of childhood onset anorexia nervosa between social classes seems to be fairly similar to that in adults, with an over-representation of higher social classes (Fosson et al., 1987; Gowers, Crisp, Joughin & Bhat, 1991; Higgs et al., 1989).

Mortality in anorexia nervosa, with an age of onset before 18 years, is up to 11%, with a mean mortality of 2.16% across studies.

Heritability is high in anorexia but almost non-existent with bulimia nervosa.

Only recently have there been reports of anorexia nervosa in adults or children from African, Asian, Caribbean, or Chinese populations, and most of these reports relate to children of migrant parents where an eating disorder may be linked to intrapersonal and intrafamilial conflicts related to the adoption of Western values (Bryant-Waugh & Lask, 1995). [Adapted from Fonagy et al., 2000, p.308].

## **Comorbidity**

Herpertz-Dahlmann and Remschmidt (1993) found anxiety disorders (41%) and affective disorders (18%) to be the most prevalent co-morbid mental health diagnoses, with a highly positive correlation between eating disorder and depressive psychopathology, compared with healthy age-matched controls. The recovered anorectic young people also scored higher on depression scales than the control (Fonagy et al., 2000).

## **Treatment**

The treatment for AN and BN are described separately owing to their differences:

**Anorexia Nervosa:** The Principle of Treatment is Weight Restoration.

- **Refeeding** (if weight is below 25% that of normal): In-patient care may support a re-feeding programme and other treatments, but is not clearly more effective than out-patient programmes.
- **Out-patient Programmes** are not recommended for AN where there is purging or vomiting because of the dangers of low potassium levels in individuals already physically compromised.
- **Psychological Therapies:**
  - **Multi-Modal Therapy:** There is little doubt that young people with anorexia benefit from multimodal treatment programs (Steinhausen, 1985; Steinhausen & Seidel, 1992), but little work has been done to evaluate the effects of different components of treatment for different young people (Wolpert et al., 2006). The exceptions include most studies that report on behavioural methods.
  - **Individual Psychotherapy:** There is no evidence that individual psychotherapy is effective on its own in children and young adolescents with AN (Steinhausen, 1995; Wolpert et al., 2006).
  - **Behavioural Therapy:** Operant Conditioning (all ages, effective in the short term, and Cognitive Methods (older adolescents. (For example, challenging the irrational beliefs regarding body-size). This treatment has shown some efficacy for treatment with older adolescents (Bemis, 1987).
  - **Family Therapy:** Appears to be effective in the treatment of AN, especially on the treatment of young people less than 19 years where the illness is not chronic (Russell, Szumukler, Dare & Eisler, 1987).

- **Medication:** Medications that have been trialled include neuroleptics, appetite stimulants and anti-depressants. There is little evidence to support the use of these medications. There is some evidence that SSRI's may be useful where there is co-morbid depression, and the combination of psychotherapy and fluoxetine may be helpful in maintaining weight gain once this has been achieved (Peterson & Mitchell, 1999), although this would need to be monitored in light of recent concern re suicidality and SSRI's (see section on Depression).

### **Bulimia Nervosa:**

- **Out-Patient Treatment:** Most patients with bulimia nervosa can be treated on an out-patient basis (Hsu, 1990; Mitchell et al., 1990), with less than 5% requiring inpatient care (Fairburn, Marcus & Wilson, 1993).
- **Psychological Therapies:**
  - **Interpersonal Psychotherapy (IPT):** IPT has been found to be more effective than behavioural therapy in the treatment of BN (Fairburn, 1994; Fairburn et al., 1991; Fairburn et al., 1993).
  - **CBT:** Has been found to be superior to behaviour therapy in the treatment of BN in adolescents, but not as yet for children, and further research is required (Fairburn, 1994; Fairburn et al., 1991; Fairburn et al., 1993). CBT results in reduction of bulimic behaviour, cognitive distortions and attitudes associated with bulimia (Lewandowski, Gebing, Anthony & O'Brien, 1997).
  - **Behavioural Therapy:** Behaviour therapy is less effective than when combined with a cognitive approach. Exposure with response prevention appears to be effective (Leitenberg et al., 1988; Rosen & Leitenberg, 1982).
  - **Massage Therapy:** Massage therapy may be beneficial as an adjunct to other therapies (Field et al, 1998).
  - **Self-Help and Guided Self Help:** Self-help and guided self help appear promising (Carter & Fairburn, 1998).
  - **Family Therapy:** Family therapy may reduce bulimic behaviours in some adolescents with BN (Dodge et al., 1995).
- **Medication:**
  - **Anti-depressants:** May reduce the drop out from treatment rate in some people with BN and may reduce the frequency of binge-eating amongst people with BN of normal weight.

- **Fluoxetine:** It has been shown that an increased dose of fluoxetine over that, which is effective in treating depression, is more effective in the treatment of bulimia nervosa (Fluoxetine Bulimia Nervosa Collaborative Study Group, 1992).

## **TREATMENT MATRIX: EATING DISORDERS- ANOREXIA NERVOSA**

**AGE OF ONSET:** Median age 15-20, although frequently presents from age 10.

<b>TREATMENT</b>	<b>AGE: CHILD</b>	<b>AGE: ADOLESCENT</b>
<b>INPATIENT VS OUTPATIENT</b>	No clear evidence that in-patient is superior although may assist in provision of interventions, and re-feeding.	No clear evidence that in-patient is superior although may assist in provision of interventions and re-feeding.
<b>MEDS</b>		Neuroleptics, Appetite stimulants, antidepressants: No Evidence, although anti-depressants effective for comorbid depression.
<b>BEHAVIOURAL: OPERANT CONDITIONING AND COGNITIVE METHODS</b>	Best Supported.	Best Supported.
<b>FAMILY THERAPY</b>	Best-Supported treatment when used with people under 19 years without chronic AN	Best-Supported treatment when used with people under 19 years without chronic AN
<b>CBT</b>	Not adequately evaluated.	Promising- Needs further evaluation.
<b>IPT</b>	Not adequately evaluated.	Not adequately evaluated.

**N.B** The blank cells in the matrices represent that no specific literature was found in this area.

### **LEVELS OF INTERVENTION (See page 8 for detail)**

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **TREATMENT MATRIX: EATING DISORDERS- BULIMIA NERVOSA**

**AGE OF ONSET:** Median age 15-20, although frequently presents from age 10.

<b>TREATMENT</b>	<b>AGE: CHILD</b>	<b>AGE: ADOLESCENT</b>
<b>INPATIENT VS OUTPATIENT</b>	Evidence that Out-Patient interventions are effective (Best Supported).	Evidence that Out-Patient interventions are effective (Best Supported).
<b>MEDS</b>		Antidepressants (Fluoxetine) appears promising for reducing bulimic features.
<b>IPT</b>	Best-Supported.	Best-Supported.
<b>FAMILY THERAPY</b>	Promising in reduction of bulimic behaviours.	Promising in reduction of bulimic behaviours.
<b>MASSAGE</b>	BN: Promising: May be effective as an adjunct to other therapies.	BN: Promising: May be effective as an adjunct to other therapies.
<b>GUIDED SELF HELP</b>	BN: Promising.	BN: Promising.
<b>BEHAVIOURAL</b>	Less effective than when combined with cognitive methods. Exposure with response prevention appears to be effective.	Less effective than when combined with cognitive methods. Exposure with response prevention appears to be effective.
<b>CBT</b>	Not yet adequately evaluated for children.	Best-Supported: Effective for adolescents, not yet for children.

**N.B** The blank cells in the matrices represent that no specific literature was found in this area.

### **LEVELS OF INTERVENTION (See page 8 for detail)**

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
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## **ADDICTIONS**

The substances referred to are those that influence mood and behaviour with undesirable psychological consequences when taken in excess. This includes alcohol, illicit and prescribed drugs, and volatile substances. Whilst gambling has been identified as a growing concern for youth in New Zealand (Ramage et al., 2005), it is not a focus of this review.

The two disorders that are identified in DSM-IV (American Psychiatric Association, 1994) and will be focused on in this document are:

- Substance Abuse
- Substance Dependence

There is controversy over the term addiction which is widely used in the substance-use programmes for adults, as this term may not adequately describe the range of substance problems during adolescence.

### **Prevalence**

There has been a gradual increase in the use of alcohol since World War 2 (Silbereisen, Robins & Rutter; 1995).

Many of the studies of adolescent substance use have indicated that the majority of young people in mid adolescence have used alcohol at some point. Approximately a third will have used cigarettes; nearly a half will have tried an illicit drug, often cannabis (Miller & Plant, 1996).

Family and peers are key influences on the likelihood of adolescent substance use and abuse, with non-standard family structures, early childhood exposure to alcohol, and peers involved in substance use, associated with increased likelihood. Positive relationships with parents act as protective factors for subsequent substance misuse (Fonagy & Target, 2000).

There has been an increase in binge drinking (National Institute on Drug Abuse, 1996).

Accidents are the major cause of childhood deaths, and about a third of accident fatalities in 16–19 year olds are found to be associated with alcohol (US Department of Transportation, 1993).

A significant proportion of children are drinking alcohol before they reach secondary school age, and the proportion drinking weekly has been shown to increase evenly with age, with pronounced differences in drinking patterns between girls and boys; from 12 years onwards more boys than girls are likely to be drinking (Goddard, 1996; Ramage et

al., 2005). Alcohol-related events are now the leading cause of death in youth in New Zealand (Ramage et al., 2005).

The earlier the onset of use, the more likely it is that a persistent problem will develop (Robins & Pryzbek, 1985; Robins & McEvoy, 1990). This however, is currently under debate as the outcome data for young people with dependency now entering their adult years are being evaluated (as per discussion with NZ National Addiction Centre Staff, 2006).

The Christchurch Health and Development study identified that 5.8% of youth at 15 years had a substance-abuse or dependency problem. At age 18 this had increased to 20.8% (Fergusson et al., 2003).

The high rate of prevalence indicates the need for well developed services offering comprehensive programmes which are integrated with families, schools and communities (Fonagy et al., 2000).

### **Comorbidity**

Epidemiological studies have shown that there is a high prevalence of comorbidity between problems with substance misuse and mental disorders (Bukstein, Brent & Kaminer, 1989; Grella et al, 2001). In clinic populations, the more severe the problems with substance use, the greater the likelihood of co-existent mental disorder.

The most common are anxiety disorders, affective disorders and disruptive behaviour disorders. Co-occurring rates of mood and disruptive behaviour disorders were found to be much higher in a community sample of 14–17 year olds in the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) study (Kandel et al., 1999).

From studies in a number of countries, it has been found that the percentage change in alcohol consumption has the single highest correlation with changes in suicide rates (Diekstra, 1989).

In addition, many young people who deliberately harm themselves also misuse alcohol and drugs. The rates reported range from 13–42% depending on the sample and definition of misuse (Hawton et al., 1982; Spirito et al., 1989).

Studies of adolescents (Kaminer, Tarter, Bukstein & Kabene, 1992[iv]) suggest that comorbidity influences treatment outcome.

In New Zealand, the Dunedin Multidisciplinary Health and Development Study gathered mental health data at ages 11, 13, 15, 18, and 21 (Newman et al., 1996). The prevalence of DSM-III-R substance disorders, at age 21, was 9.8% for alcohol dependence and 9.6% for marijuana dependence, with rates nearly three times higher in young men than in young women. Among those with substance disorders, 43.2% had a

history of conduct disorder at younger ages; 38.1% had a previous history of depressive disorder, 29% of anxiety disorder, 11% of attention deficit disorder, and 21.9% had no history of previous disorder.

Large-scale prospective studies have found that drug use and criminal behaviour develop together across the teenage years (Elliot, Huizinga & Ageton, 1985; Jessor & Jessor, 1977). This research suggests that prior criminality tends to predict drug use, while drug use also tends to predict criminality.

### **Age of Onset**

Since 1990, the proportion of notified drug dependants aged under 25 has increased by 20% (HM Government Statistical Service, 1994). There has also been a substantial increase in young people under 25 who have been found guilty of drug-related offences.

An early onset of legal or illegal recreational drug use, or significant escalation in the teenage years, are negative prognostic signs. Regular or heavy consumption of these drugs during adolescence has a strong association with later alcohol and drug abuse, mental and physical problems, difficult family, social and sexual relationships, and disruption of education and employment.

A 20-year longitudinal population-representative study has shown that childhood aggression was related to both young adult drug use and behavioural difficulties, and that there was stability of drug use and behavioural concerns between early adolescence and young adulthood (Brook et al., 1996). Drug use during early adolescence had a negative impact on behavioural presentations, not only in early adolescence, but also in late adolescence and young adulthood.

Increased alcohol use was found to be associated with an increased lifetime occurrence of drug use disorders, daily tobacco use, and depressive disorders and disruptive behaviour disorders in a community sample of older adolescents (aged 14 to 18 years) (Rohde, Lewinsohn & Seeley, 1996).

The correlations between tobacco, alcohol, and cannabis use were studied in a birth cohort of New Zealand children at age 16 (Lynskey, Fergusson & Horwood, 1998). It was found that in the region of 54% of the correlations could be explained by a factor representing the individual's vulnerability to substance use, i.e. the extent of association with delinquent or substance using peers, novelty seeking, and parental illicit drug use. Similar findings have emerged from a sample of 1,687 adolescents living in mixed urban/rural communities in Colombia, South America (Brook et al., 1998). There were some notable gender differences among the findings of this study, as elsewhere (Farrell & White, 1998; King et al., 1996; Lifrak et al., 1997), with the common finding of a stronger relationship between peer pressure and use among girls than boys.

## Assessment

A New Zealand based instrument for screening for substance use is currently being trialled and to date has been shown to be valid, reliable and youth appropriate. This tool (The Substances and Choices Scale SACS) is completed in approximately 5 minutes and rates the number of times a substance has been used over the previous month yielding a score out of 20. When used in conjunction with the Strengths and Difficulties Questionnaire (SDQ), a snapshot of a young person's psychosocial functioning is possible. Once the trialling of this tool is completed, it will be available via the internet for broad use (Christie, Marsh, Sheridan, Wheeler, Suaali-Sauni, Black & Butler, 2007)

## Treatment

- **Psychological Therapies:** The primary goal of most adult treatment programmes has been achieving and maintaining abstinence from substance use. In recent years this has been seen as sometimes unrealistic in the youth population, and harm reduction has been the preferred goal (AACAP, 2004).

Among the important characteristics of successful treatment programmes are sufficient duration, intensiveness and comprehensiveness; the presence of after-care or follow-up treatment; sensitivity to cultural, racial and socioeconomic realities of adolescents and their families; family involvement; collaboration with social services agencies; promotion of pro-social activities and a drug free lifestyle; and involvement in self-help groups (Fonagy et al., 2000).

Many of the approaches used with adults have not been applied to children and adolescents, for example, exposure treatments and harm minimisation (Fonagy et al., 2000).

- **Interpersonal & Psychodynamic Therapies:** Interpersonal and psychodynamic therapies have not been adequately researched despite their anecdotal evidence as being of use (Fonagy et al., 2000).
- **Motivational Interviewing:** Motivational Interviewing has shown promise. This therapy is aimed at encouraging a 'state of change' in which the young person is more open to the concept of treatment (Colby et al., 1998; Monti et al., 1999).
- **CBT & Behavioural Therapies:** Psychosocial treatments based on social learning theory and cognitive approaches appear to be more effective than no treatment or treatment as usual (Kaminer et al, 1999; Stanton & Shadish, 1997; Myers et al., 1993).

- **Adolescent Peer Group Therapy:** Cognitive-behavioural approaches such as rehearsal and social control contracting (Azrin et al., 1994; Fisher & Bentley, 1996), problem-solving and coping skills training (Hawkins, Jenson, Catalano & Wells, 1991), and relapse prevention techniques (Catalano, Hawkins, Wells, Miller & Brewer, 1990; Myers, Brown & Mott, 1993) show promise, at least for the few months after discharge from treatment. However significant caution should be taken when forming groups with deviant peers to prevent exacerbating drug use (AACAP, 2004).
- **12 Step Approaches:** 12 Step Approaches provide one of the most common interventions. Whilst they appear to be effective for young people, they have not been adequately evaluated (Jaffe, 2001).
- **Family Therapy:** In a meta-analysis and literature review, Stanton and Shadish (1997) and Williams and Chang, (2000) support the superiority of family therapy for adolescent substance use disorders over other modalities and note that family treatment can enhance the effectiveness of other approaches. These results have also been found among adults (Wolpert et al., 2006).
- **Structural-Strategic Family Therapy (SSFT):** has shown to be efficacious in improving parent-adolescent relationships, and in turn reducing adolescent drug use (Joanning, Quinn & Mullen, 1992; Lewis, Piercy, Sprenkle & Trepper, 1990).
- **Multi-Systemic Therapy (MST):** MST has been shown to be particularly effective where substance misuse is part of a wider pattern of problems (Szapocznik et al., 1988; Wolpert et al., 2006).
- **Prevention Programmes:** Prevention approaches that include dealing with resistance skills, psychological inoculation, and personal and social skills training have been shown significantly to improve knowledge and to reduce drug use for periods of over one year. The unique contribution of each component in these types of multicomponent strategy has not been determined. However, programmes that are interactive and focus on acquiring skills are more effective than those that concentrate on improving knowledge (Fonagy et al., 2000).
- **Medications:** The two groups of medications that have been used are the aversion agents and the substitution agents (methadone for opioids and naltrexone for alcohol).
  - **Disulfiram:** Disulfiram is the most commonly used aversion agent. The use of disulfiram has not been fully researched with adolescents and should be reserved for young people with severe dependence when other treatments have not been useful.

- **Methadone:** The use of substitution agents such as methadone for opiate dependence has been well researched and been found to be moderately effective for maintenance therapy in those people with long histories of dependence (Dole et al., 1969; Gunne & Gronbladh, 1981; Newman & Whitehill, 1979), but of limited use in people with short histories, such as young people (Farrell & Taylor (1994).
- **Naltrexone:** Is currently a very promising medication in the treatment of alcohol dependence and is gaining favour as a treatment for young people (Fonagy et al, 2000).
- **Medication & Co-morbidities:** Medications for co-morbid mental disorders such as ADHD, depression and anxiety disorder have been not adequately researched with regard to their use with this population, but are prescribed because of their positive effects in treating the comorbidities.

## TREATMENT MATRIX: SUBSTANCE DISORDERS

AVERAGE AGE OF ONSET: Adolescence.

TREATMENT: MEDICATION	ADOLESCENT
<b>METHADONE</b>	Moderately Recommended: Best Supported
<b>NALTREXONE</b>	Moderately Recommended: Best Supported.
<b>MEDICATION FOR CO-MORBID CONDITIONS</b>	Needs further evaluation. Insufficient evidence re effect on substance abuse-dependence, important re use for dependency.
<b>DISULFIRAM</b>	Not recommended unless serious dependence where other treatments have been trialled.
<b>PSYCHOLOGICAL: STRUCTURAL STRATEGIC FAMILY THERAPY</b>	Best Supported.
<b>MOTIVATIONAL INTERVIEWING</b>	Promising: Probably efficacious.
<b>CBT AND BEHAHAVIOURAL APPROACHES</b>	Promising: Probably efficacious.
<b>MST</b>	Promising: Probably efficacious.
<b>PREVENTION PROGRAMMES</b>	Promising: Support for skills-oriented resilience-building programmes.
<b>INTERPERSONAL AND PSYCHODYNAMIC THERAPY</b>	Needs further evaluation- Anecdotal evidence of their use.

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **PSYCHOTIC DISORDERS**

The two most significant psychotic disorders emerging in childhood and adolescence are Schizophrenia and Bi-polar illness. Bi-polar illness has tended to be misdiagnosed in the past as the psychotic symptoms present during mania and depression have been diagnosed as schizophrenia (Fonagy et al., 2000).

Disorders covered in this section are:

Schizophrenia

Schizoaffective Disorder

Bi-Polar Disorder

### **SCHIZOPHRENIA**

The range of schizophrenias are characterised by distortions of thinking and perception and an inappropriate affect. The symptoms associated with these difficulties are known as positive symptoms. Negative symptoms such as apathy, social withdrawal, poverty of speech and incongruent emotional responses may also be present. Scholastic ability and self-care may also be affected (Fonagy et al., 2000).

#### **Prevalence**

There are very few studies determining the incidence of schizophrenia in childhood and adolescence. One study identified the ages at first hospitalisation being 15-25 for males and 25-35 for females, although some females were identified before 25 years (Zigler & Levine, 1981). The peak ages for onset are 13-30 years (American Academy of Child & Adolescent Psychiatry: AACAP: 2000).

In another study, the prevalence in children was identified as much lower than adolescents, being 2 per 10,000 children under 12 years (Eaton et al, 1992; 1992).

#### **Age of Onset**

The onset of Schizophrenia is therefore rare before 13 years of age (AACAP, 2000). The earlier the onset the more severe the disorder (Eaton et al., 1992). Early detection and treatment are important in reducing the effects of the disorder (Falloon et al, 1998).

## Treatment

There is a lack of clear empirical evidence on which to base treatment planning, however as child, adolescent and adult onset schizophrenia have marked similarities, using the adult literature has predominated (Clark & Lewis, 1998; McClellan & Werry, 1997).

Treatment strategies are aimed at symptom control, minimising long term effects and preventing relapse (AACAP, 2000).

Treatments are both specific (targeted at the positive and negative symptoms) and general (aimed at supporting the psychological, social, cultural and educational needs of the child or young person and their family (AACAP, 2000).

- **Assessment:** Given the complexities in diagnosing schizophrenia in childhood (consider the developmental process and the difficulty separating out distortions of thought from normal processes), assessment needs to be very thorough and may be required to be undertaken in an inpatient setting (AACAP, 2000; Asarnow, 1994; Caplan, 1994; Clark & Lewis, 1998).

Differential diagnoses must be ruled out such as organic conditions and bi-polar disorder. The stigma attached to the disorder makes correct diagnosis even more important (AACAP, 2000; McClellan & Werry, 1997).

- **Multi-modal Approach:** A multi-modal approach to treatment is recommended. This includes medication, cognitive, behavioural and family therapies and environmental manipulation (AACAP, 2000; Clark & Lewis, 1998; McClellan & Werry, 1997; Parry-Jones, 1991).

- **Psychological Treatments:** There are few studies that have evaluated the use of psychosocial treatments in children or young people with schizophrenia. Psychosocial treatments have been chosen in line with the findings from adult-studies.

Adult studies have identified that the principle interventions are social skills training, family intervention and CBT (Clark & Lewis, 1998; McClellan & Werry, 1997). However, there is little empirical evidence for these approaches and some suggestion that basing treatment on adult studies is not justified (Wolpert et al., 2006).

Psychosocial interventions including psycho-education must be aimed at supporting the developmental needs of the child or young person. A range of community, day and in-patient programmes is important alongside an integrated approach with family and the community (Fonagy et al., 2000).

- **Medication:** Medication is the recommended treatment in the acute phase of schizophrenia.
  - **Neuroleptics:** The use of anti-psychotic medication in children and adolescents with schizophrenia has been poorly researched (Gadow, 1992). Of three studies using the 'traditional' anti-psychotic medication Haloperidol, there were substantial clinical improvements although there were also marked side-effects such as Parkinsonian symptoms (AACAP, 2000; Spencer et al., 1992; Richardson et al., 1991).
  - **A-Typical Neuroleptic Medication:** Clozapine has been evaluated and is reported to be an effective treatment for both positive and negative symptoms of schizophrenia although has significant side-effects that must be monitored for very closely such as neutropenia (Birmaher, Baker & Kapur, 1992; Frazier, Gordon & McKenna, 1994; Gonzales & Michanie, 1992; Kumra et al., 1996; MacEwan & Morton, 1996; Mozes et al., 1994); Siefen & Remschmidt, 1986; Wolpert et al., 2006). Future studies will need to focus on the newer a-typical neuroleptics (AACAP, 2000).
- **Electro-Convulsive Therapy (ECT):** ECT has not been adequately evaluated for children or young people with psychotic disorders and is not recommended as a treatment (Wolpert et al., 2006). If it is used it should only be in severe illness where all other treatment has not been of use (AACAP, 2000; Bertagnoli & Borchardt, 1990).

**TREATMENT MATRIX: SCHIZOPHRENIA**

**AVERAGE AGE OF ONSET:** Adolescence, rare before age 13.

TREATMENT	AGE: CHILD	ADOLESCENT
<b>TRADITIONAL NEUROPLETICS: HALOPERIDOL</b>		Best-Supported in acute phase: Monitoring for side-effects required.
<b>ATYPICAL NEUROLEPTICS: CLOZAPINE</b>		Best Supported in acute phase: Monitoring for side-effects is required.
<b>ECT</b>	Not adequately evaluated.	Not adequately evaluated.
<b>MULTI-MODAL AND INTEGRATED WITH FAMILY AND COMMUNITY</b>	Widely used clinically, recommended but not well evaluated.	Widely used Clinically, recommended but not well evaluated.

\*The blank cells in the matrices represent that no specific literature was found in this area.

**LEVELS OF INTERVENTION (See page 8 for detail)**

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **SCHIZOAFFECTIVE DISORDER**

Schizoaffective disorder can be diagnosed when the presentation includes both schizophrenic and affective features. The affective features can be depression or mania. There are no cited studies that provide evidence to make any statements about the evidence-based treatments for this disorder (Fonagy et al., 2000).

## **BIPOLAR DISORDER**

### **Description**

DSM-IV recognises 2 types of bipolar disorder, types I and II. Bipolar I is characterised by the occurrence of 1 or more manic episode or mixed episodes. Bipolar II disorder is characterised by the occurrence of one or more major depressive episodes accompanied by at least one hypomanic episode (APA, 1994).

### **Prevalence**

There are very few studies of psychotic disorder in children and adolescence. Two studies identified the incidence as being 0.2 and 0.3% (Costello et al, 1988; Lewinsohn, Hops, Roberts, Seeley & Andrews, 1993). The onset may occur following the initiation of antidepressant medication for a depressive illness (Bowring & Kovacs, 1992). The age of onset may be 8 to 19 years with a mean onset age of 15.9 years (Carlson et al, 1977), with 20% having their first episode during adolescence (AACAP, 2000). Both sexes are affected equally (AACAP, 2000).

### **Comorbidity**

There are no reported studies that have focused on comorbid disorders with bipolar disorder; however these are not uncommon (Fonagy et al., 2000). ADHD and Conduct Disorder are frequently seen in young people with Bipolar Disorder (Carlson, 1990). Substance abuse has also been noted (Borchardt & Bernstein, 1995; Carlson, 1990).

### **Treatment**

As for schizophrenia, there are very few studies on appropriate interventions during childhood and adolescence, and the treatments that are utilised follow those used in adult mental health (Fonagy et al., 2000).

As for schizophrenia, a multi-modal approach is recommended with a focus on treating acute phases and supporting the child or young person with their development (AACAP, 2000). Treatment may be offered in out-patient settings with inpatient care being

potentially required during acute phases of the illness (Fonagy et al., 2000).

- **Assessment:** Given the complexity of identifying bipolar disorder, a comprehensive assessment is imperative and must precede treatment planning.
- **Psychological Treatments:** Psychosocial treatments show promise, but have not been systematically evaluated in children and adolescents with Bipolar Disorder (Kafantaris, 1995). There are no specific psychotherapies in the treatment of mania (AACAP, 1997).

Recommended programmes include:

- **Family Work:** Children, young people and their families are likely to require extensive support with maintenance of education and social relationships between episodes an important priority (Fonagy et al., 2000).
  - **Psycho-education:** Providing information to the child/young person and their family on all aspects of the disorder (Goodwin & Jamison, 1990; Prien & Potter, 1990).
  - **Relapse Prevention:** Initiatives which includes working with the family.
  - **Other Supports:** Such as consultation with schools and other agencies.
  - **Attention to comorbid conditions (AACAP, 1997; Fonagy et al., 2000)**
- **Medication:** Mood Stabilisers appear to be the medication of choice:
    - **Lithium Carbonate:** Recent reviews of the use of Lithium in the treatment of Bipolar Disorder have identified the efficacy of lithium in the treatment of adults; however there are less studies that have focused on children and young people (Alessi et al., 1994; Botteron & Geller, 1995; Kafantaris, 1995; McClellan & Werry, 1997). There is some evidence supporting the use of lithium in the acute phase of the disorder, but there have been insufficient studies identifying the use of Lithium for maintenance. On going monitoring using blood-testing to ensure the level remains within the appropriate serum level is essential to prevent toxicity (Wolpert et al., 2006).
    - **Neuroleptic Medication:** Despite a lack of evidence supporting the use of neuroleptic medications, they are recognized as being useful (Kafantaris, 1995; McClellan & Werry, 1997).
    - **The Anti-Convulsants:** Valproate and Carbamazepine have been found to be useful in adults. There has been one trial which has identified that Valproate may be as effective as Lithium (Papatheodorou & Kutcher (1993), and another that has demonstrated the efficacy of Carbamazepine when used as an adjunct with Lithium (Garfkel et al, 1985).

- **Benzodiazepines & ECT:** There is no current evidence to support the use of either (Fonagy et al., 2000).

**TREATMENT MATRIX: BIPOLAR DISORDER**

**AVERAGE AGE OF ONSET:** Mid adolescence, around 15 years of age.

TREATMENT	CHILD TO ADOLESCENT
LITHIUM	Best Supported.
ANTI-CONVULSANTS: VALPROATE & CARBEMAZEPINE	Promising, Probably efficacious.
NEUROLEPTICS	Not well evaluated but considered clinically useful.
BENZIDIAZEPINES	No Current Evidence.
PSYCHO-EDUCATION & RELAPSE PREVENTION	Recommended, Best Supported.
CBT & IPT	Promising for depressed stage.
ECT	No evidence.

**LEVELS OF INTERVENTION (See page 8 for detail)**

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **PERVASIVE DEVELOPMENTAL DISORDERS**

Autism and other pervasive developmental disorders are conditions with onset in the first years of life which disrupt a range of developmental processes (AACAP, 1999). Included in this section are:

- Childhood Autism
- Atypical Autism
- Aspergers Syndrome
- Rett's Syndrome.

### **CHILDHOOD AUTISM**

#### **Description**

Childhood autism is the best known of the autisms. It is characterised by deficits in social interaction, verbal and non-verbal communication and restriction of interests. The presence of a variety of mannerisms is also common (AACAP, 1999).

#### **Prevalence**

The prevalence from reviews is 7-17 per 10,000 of population (Gillberg et al., 1991). The onset occurs at birth but is often diagnosed in infancy and early childhood and is more common in boys than girls. The delayed developmental level at 5 may be prognostic (Lotter, 1978).

Autism is 3–4 times more common in boys than girls, although girls tend to have more significant intellectual disability (Lord, Schopler & Revicki, 1982).

There is a general deterioration in functioning in 50% of adolescents, some of which can be attributed to onset of seizures. However, 30% show some improvement in behaviour and functioning (AACAP, 1999).

“The outcome is best for the children with later onset of autism (>24 months), those with higher general intelligence (IQ over 60) and intelligible speech by the age of 5 years (Fonagy et al., 2000. p.283).”

#### **Co-morbidity**

Tics and ADHD are commonly occur co-morbidly with autism (AACAP, 1999).

## Treatment

- **Assessment:** A comprehensive mental health assessment is imperative and must precede treatment planning. There needs to be a strong focus on the developmental history, medical (including neurological) and social histories. Observations are required across settings. An understanding of overall developmental potential is important. The specific problem behaviours must be identified, as these will become the focus of treatment (AACAP, 1999; Wolpert et al., 2006).
- **Medication:** Pharmacological Therapies are not curative, but are sometimes used for behaviour management, and are sometimes used when behavioural therapy has not been successful or needs to be enhanced by a physical therapy (AACAP, 2000; Fonagy et al., 2000; Wolpert et al., 2006).

The following pharmacologic interventions may have a role:

- **Neuroleptics:** Haloperidol is the only agent consistently reported to be effective but it has major side effects such as tardive dyskinesia (Campbell et al., 1996).
  - **Naltrexone:** Kolmen et al., (1995; 1997) have reported a randomised placebo controlled double-blind study of the use of naltrexone in autistic children. Their sample of 24 children showed a statistically significant behavioural response to naltrexone. The features that improved were hyperactivity and disruptive behaviour. Of the 24 subjects, 11 showed this positive response based on parent, teacher and laboratory-standardised measures. As with the Campbell and colleagues (1993) study, there was no improvement in learning associated with naltrexone use in the short-term.
  - **Tri-cyclic Antidepressants:** Clomipramine is superior to placebo in reducing autistic withdrawal and preoccupations, hyperactivity and oppositionality. Desipramine was significantly less effective than clomipramine (Gordon et al., 1993).
  - **Psycho-Stimulants:** For autistic children with comorbid hyperactivity and short attention span, the psycho-stimulants are a promising treatment (Quintana, Birmaher & Stedje, 1995). Recent evidence contradicts earlier evidence that these medications increase stereo-typical movements (Aman, 1982; Fonagy et al., 2000).
  - **Fenfluramine:** There is limited evidence for the use of this medication. It may in fact have a negative impact on the ability to reason (AACAP, 1999).
- **Other Treatments:**  
[Adapted from Fonagy et al., 2000. p.295; Wolpert et al., 2006. P. 27]

- **Auditory Integration Training:** Treatment aims at reducing hypersensitivity to sound which is reported to be experienced by up to 40% of children with autism. There is limited evidence to suggest that this is effective at this time (Wolpert et al., 2006).
- **Secretin:** Secretin is a hormone treatment which has developed notoriety in recent times. Further trialling is required before there is sufficient evidence to suggest its efficacy (Fonagy et al., 2000).
- **Behavioural Therapy:** Intensive structured behavioural programs have been found to be beneficial with some of the behavioural features such as tantrums, aggression and sleep problems. The need for these interventions is likely to be long term (Gillberg, 1990). Studies by Lovaas (1987) and McEachin et al., (1993) strongly suggest that behavioural treatments are beneficial although longer-term outcome studies are required. However, there is fairly good evidence that behavioural interventions in the home and school setting lead to significant gains. The improvements shown by these studies include persisting gains in IQ, daily living skills, communication and the ability to socialise, as well as a reduction in behaviour problems (AACAP, 1999; Fonagy et al., 2000; Wolpert et al., 2006).
- **Parent Training:** Parent Training is considered to be an important part of the behavioural programmes (Rutter, 1985). As parent training is seldom offered in the absence of behavioural programmes it is not possible to identify that parent training alone is effective in the management of autism.
- **Sibling Training:** Sibling Training is a promising treatment but to date has not been fully evaluated (Celiberti & Harris, 1993; Wolpert et al., 2006).
- **Social-Skills Training:** There is insufficient current evidence that social-skills training, either group or individual is effective in the management of autism (Fonagy et al., 2000; Wolpert et al., 2006).
- **Counselling for parents:** There are no evaluative studies, although parental support is strongly recommended (Rutter, 1985; Shea, 1993).
- **Educational Approaches:** Lord and Rutter (1994) have reviewed the subject of school programmes, used to encourage satisfactory behaviours such as task completion and self-management. They have identified educational improvements in recent decades, indicating that individual plans and structured environments benefit these children (Harris, Handleman, Kristoff, Bass & Gordon, 1990).

## **OTHER PERVASIVE DEVELOPMENTAL DISORDERS:**

### **Asperger Syndrome**

#### **Description**

The condition is characterised by a repetitive narrow range of interests. The essential difference from autism is a history of appropriate development of language and cognition. Although most individuals are of normal intelligence, they are often clumsy (Fonagy et al., 2000, p. 207).

#### **Prevalence**

The prevalence is as for autism.

#### **Co-morbidity**

Co-morbidity in Asperger syndrome is common with increased rates of attention deficit problems, anxiety symptoms including generalised anxiety and phobias compared to the general population. Low self-esteem is common in adolescence and may be accompanied by depressive symptoms. There may also be an increased risk of a major depressive illness. Specific learning difficulties particularly affecting language comprehension and fine motor co-ordination are usually present.

#### **Treatment**

There is insufficient evidence regarding effective treatments although the recommended treatments include: Comprehensive assessment, promoting social and cognitive play and speech and language therapy (Szatmari, 1991, cited in Fonagy et al., 2000. p. 298).

### **Rett's Syndrome**

#### **Description**

This is a severely disabling condition only affecting girls.

#### **Prevalence**

The prevalence rate of 1 in 15,000 girls. It is characterized by autistic behaviours, stereotypic movements, breath-holding and seizures. Growth and development are normal for the first few months.

#### **Co-morbidity**

Intellectual Disability is common.

## Treatment

The treatments as reviewed by Perry in 1991 are focused on controlling the seizures and behaviour therapy to reduce self-injury. These have not been fully evaluated for their efficacy.

## Atypical Autism: PDD-NOS

There has been little research into this form of pervasive developmental disorder and consequently it is poorly defined. It should refer to children with features of autism but who have better cognitive and communicative skills and some degree of relatedness. The treatment is as for autism (Fonagy et al., 2000).

## TREATMENT MATRIX: CHILDHOOD AUTISM

### AGE OF ONSET: From early childhood

TREATMENT	AGE: CHILD to ADOLESCENTS
NEUROLEPTICS	Haloperidol is Best-Supported but has significant side-effects.
NALTREXONE	Promising for hyperactivity and disruptive behavior.
TRI-CYCLICS	Clomipramine promising for reducing with withdrawal and pre-occupations. Desipramine less effective than clomipramine.
STIMULANTS	Promising for comorbid hyperactivity and decreased concentration span.
FENLURAMINE	No evidence.
SECRETIN	Promising but little evidence to date.
BEHAVIOURAL THERAPY	Best-supported although requires long term approach.
PARENT TRAINING	Promising. Probably efficacious when used with behavioural treatments.
SIBLING TRAINING	Promising- Needs further evaluation.
COUNSELLING FOR PARENTS	Recommended although not evaluated.
EDUCATIONAL APPROACHES	Promising- Evidence that individual programmes and structured environments are beneficial.
AUDITORY INTEGRATION TRAINING	Promising but little evidence to date.
SOCIAL SKILLS TRAINING	Not adequately evaluated.

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).

## **TOURETTE DISORDER**

### **Description**

Tourette Disorder is the most severe form of chronic tic disorder. A tic is a sudden repetitive movement, either motor or verbal, and is usually of brief duration (Leckman & Cohen, 1994).

It is characterised by the presence of both motor and one or more vocal tics (repetitive involuntary stereotyped movements) at some time during the illness. The tics occur many times a day, usually in bouts, nearly every day or intermittently throughout a period of more than a year (Fonagy et al., 2000).

There is often a reduction in the features of Tourette Disorder by the early adult years (Bruun, 1988; Lees, 1985; Park et al., 1993). The greater the reduction may depend on the absence of comorbid mental disorder.

There appears to be a strong genetic influence (Comings, Comings, Devor & Cloninger, 1984). There is some evidence that suggests that OCD and Tourette Disorder are genetically linked, and that an early onset of OCD may precede Tourette Disorder (Pauls, Raymond, Stevenson & Leckman, 1991).

### **Prevalence**

The prevalence of Tourette syndrome appears to be in the region of 3–6 per thousand children in the general population (Apter, Pauls & Bleich, 1993; Azrin & Peterson, 1990; Bronheim, 1991; Caine et al., 1988; Comings, Himes & Comings, 1990; Jagger et al., 1982; Kurlan, Como, Deeley, McDermott & McDermott, 1993; cited in Fonagy et al., 2000, p. 29).

In a large study by Comings et al (1985), the male-female ratio was 4:1. The average age of onset of tics or vocal noises was 6.9 years (Comings & Comings, 1985).

### **Comorbidity**

Emotional and behavioural problems are common with Tourette Syndrome (Spencer et al, 1995). Up to 20% of children or young people with Tourette Disorder are also reported to have Conduct Disorder (Leckman & Cohen, 1994).

Rates up to 55% have been reported for Attention Deficit Disorders (Park et al., 1993; Wodrich et al., 1997).

Co-morbid OCD, anxiety and depression are also common (Coffey, Frazier & Chen, 1992; Singer, Schuerholz & Denckla, 1995).

## Treatment

- **Assessment:** A comprehensive assessment is essential to enable early intervention and to identify co-morbid disorders (Fonagy et al., 2000).
- **Psychological Treatments:**
  - **Behavioural Therapies:** Behavioural Therapies have been found to be beneficial. Examples are: **Habit Reversal** (doing an opposite movement to the tic) and **Relaxation** (Azrin & Peterson, 1990). A variety of these interventions which also involve parents appears to be promising (Azrin & Peterson, 1990), but requires further evaluation (Fonagy & Target, 2000).
  - **Psychotherapy & Other Psychosocial Approaches**  
There have been other approaches tried, and with reported success, however there have been no empirical evaluations to date. It seems clear that involving family and schools is an important part of the treatment (Fonagy et al., 2000).
- **Medication:** Medication is thought to reduce the severity of the features by approximately 50% (Cohen, Riddle & Leckman, 1992).  
Medication may also be used to treat the co-morbid disorders (Fonagy et al., 2000).
  - **Neuroleptics:**
    - **Haloperidol** is the most commonly prescribed medication for Tourette Disorder (Bornstein, Stefl & Hammond, 1990). Despite this, there is very limited empirical research that has been completed using this intervention (Fonagy et al., 2000). The medication has significant side-effects but is reported to reduce tics by up to 70%, however has no effect on behaviour (Cohen et al., 1992; Wolpert et al., 2006).
    - **Pimozide** has been found to reduce tic severity in up to 70%. Studies also demonstrated that Pimozide caused fewer side-effects (Sandor, Musisi, Muldofsky & Lang, 1990; Shapiro & Shapiro, 1984; Shapiro et al., 1989), however, ECG changes may occur in up to 20% of children and young people prescribed this medication, and therefore monitoring is required (Sallee, Nesbitt, Jackson, Sine & Sethuraman, 1997).
  - **A-Atypical Neuroleptics: Risperidone, Olanzapine, Clozapine & Ziprasidone**  
Overall, the response to the atypical neuroleptics is very promising but double-blind studies are required before definite conclusions can be drawn about their benefits and safety (Fonagy et al., 2000).
  - **Respiridone:** Has been found to be useful in tic reduction (Lombroso et al., 1995; Wolpert et al., 2006). Olanzapine needs further trialling, clozapine has not been found to be effective. Ziprasidone appears to be the most promising and may have the least side-effects (Sallee et al., 2000).

- **Clonidine:** Clonidine has been well evaluated, and has been proven to be effective in tic reduction. It has fewer side effects than the neuroleptics, and concerns re ECG changes have now been ameliorated. Clonidine is also thought to be positive in reducing problem behaviours (Borison, Arg & Hamilton, 1983; Leckman et al., 1991; McKeith et al., 1981).

- **Medication for Tourette Disorder & Comorbid Disorders:**

- **Tourette Disorder & ADHD:**

Stimulant medication may be used but needs to be monitored carefully as there has been evidence of these medications exacerbating tics in some children/young people (Castellanos et al., 1997; Nolan & Gadow, 1997; Wolpert et al., 2006).

- **Clonidine** has been found to be useful although sedation has been a problem (Leckman et al., 1991).
- **Tricyclics** such as despiramine have been found to be useful, although the risk of sudden death has meant close monitoring of ECG's (Biederman, 1993).

- **Tourette Syndrome & OCD:**

- **Fluoxetine** may be beneficial (Riddle, Hardin & King, 1990; Riddle, Leckman, Hardin, Anderson & Cohen, 1988), although recent concerns re increased suicidality indicate careful monitoring is required.
- **Clompiramine** has not been adequately trialed (Fonagy et al., 2000).

## TREATMENT MATRIX: TOURETTE DISORDER

AGE OF ONSET: 6.9 YEARS

INTERVENTION	CHILD-ADOLESCENT
<b>HALOPERIDOL</b>	Best supported: Well established for tic reduction, not behaviour.
<b>PIMOZIDE</b>	Best supported: Well established for consideration after haloperidol. Fewer side-effects but concerns re ECG changes.
<b>CLONIDINE</b>	Best supported: Well established for tic reduction and problem behaviours.
<b>A-TYPICALS: RISPERIDOL, OLANZEPINE, CLOXARIL</b>	Promising: Probably Efficacious: Needs more evaluation.
<b>MEDS AND COMORBIDITIES</b>	ADHD: Stimulants: Probably Efficacious may increase tics. Clonidine: Well Established although causes sedation. Tricyclics: Probably Efficacious but needs ECG monitoring. OCD: Fluoxetine: Promising, probably efficacious.
<b>PSYCHOLOGICAL TREATMENTS: BEHAVIOURAL THERAPIES</b>	Combination Treatments e.g. habit reversal, relaxation and parent involvement: Promising: Probably Efficacious: Needs more evaluation.
<b>OTHERS E.G. PSYCHOTHERAPY</b>	May be helpful- Needs more evaluation. Involving Parents and Schools is important.

### LEVELS OF INTERVENTION (See page 8 for detail)

- **Best-Supported ('Well-Established') Interventions:** At least two scientifically defensible group-design studies conducted by different investigative teams, or more than 9 single-case designs, treatment manuals and strong experimental designs (NIMH, 2001).
- **Promising ('Probably Efficacious') Interventions:** At least two studies demonstrating the intervention to be more effective than a no-treatment control group, or several single-case studies, as well as manuals that prescribe the intervention (NIMH, 2001).



## **CONCLUSION**

The interventions available for the treatment of child and youth with mental health difficulties are many and varied, but very few have been adequately evaluated. Examples of therapies that are commonly used but poorly evaluated are some of the models of family therapy. Interventions such as Interpersonal Psychotherapy also need further evaluation. Multi-modal treatment approaches are recommended in all treatment planning. Integrated programmes of care require inter-sectoral working to ensure the optimal support is available to the child, young person and their family. Cultural considerations are essential to all treatment planning and service delivery. Comorbidities must be recognised and treated accordingly. Involving children, adolescents and their families/whanau in all aspects of treatment planning and delivery is essential.

## ADDENDUM

### A). Descriptions of Parent Management Training used in Treatment of Disruptive Behaviour Disorder:

- **The Forehand & McMahon Programme:** 'Helping the Non-compliant Child' is an individual family-based program including didactic instruction, modelling, role-playing and skills practice with therapist feedback from behind a one-way screen. The program is structured in a stepwise, graded manner. This program is well supported by studies that show long-term improvements in behaviours, both targeted and untargeted, although the studies which demonstrated this cannot exclude the possibility of spontaneous remission.
- **Webster-Stratton Incredible Years** (1996) has developed a 9–10 week group discussion videotape modelling program (GDVM) which uses a standard package of 10 videotapes. The videotapes show 250 vignettes of approximately 2 minutes each in which parents interact with their children in both appropriate and inappropriate ways. After each vignette, the therapist leads a discussion of the relevant interactions and solicits parents' responses. Parents are taught play and reinforcement skills, effective limit setting and nonviolent discipline techniques, as well as problem-solving approaches. This model has been extensively researched (Webster-Stratton, 1996), having been subjected to quite stringent tests of effectiveness and has been found to be more useful in the long-term than other similar programmes. The programme has so far only been developed for younger children (3-8years), with limited adversity in their family. A significant minority of those who participate request further help.
- **The Oregon Social Learning Centre (OSLC)** programme addresses a wider age range of children (3–12 years). The behavioural focus of the programme is aggression as well as non-compliance. The programme has been well manualised (e.g. Patterson & Gullion's manual, *Living with Children*: Forgatch, 1991; Patterson, 1976; Patterson, Reid, Jones & Conger, 1975). The programme also includes a substantial component (up to 30%) where problem solving and negotiation strategies are taught, to deal with marital difficulties, family crises and parental personal adjustment problems (Patterson and Chamberlain, 1988). The OSLC programme is probably the most widely used, although not the most thoroughly evaluated, parent training procedure.
- **The Parent-Child Interaction Therapy** is a successful version of parent training based on the work of Eyberg at the University of Florida (Eyberg et al., 1995; Hembree-Kigin and McNeil, 1995). The therapy is designed to teach parents to build a warm and responsive relationship with their child and to teach the child to behave appropriately. The program has two phases. In the first phase (Child-Directed

Interaction), parents learn non-directive play skills similar to those used by traditional play therapists. In the second phase (the Parent-Directed Interaction) the parent learns, within the play interaction, to direct the child's play with clear, age-appropriate instructions.

The success of these parenting programmes is contingent on a number of factors which include:

- The severity or chronicity of the disorder, and the presence of comorbidities (Kazdin, 1995; Ruma, Burke & Thompson, 1996), as well as including parents who chose not to complete the programme (Patterson & Forgatch, 1995; Ruma et al., 1996; Strain, Steele, Ellis & Timm, 1982; Webster-Stratton, 1996).
- Parental negativity towards the child (McMahon et al., 1981; Webster-Stratton, 1996).
- Low socio-economic status is associated with more limited outcomes (Holden, Lavigne & Cameron, 1990; Kazdin, Siegel & Bass, 1992; McMahon et al., 1981).
- Maternal psychopathology, in particular depression and life events, has also been found to reduce the effectiveness of parent training (Dumas & Albin, 1986; Kazdin et al., 1992; McMahon et al., 1981; Webster-Stratton, 1996).
- More difficult and older children above the age of 8 require adjunctive treatment to parent training, to handle problems in the parental relationship (Dadds, Schwartz & Sanders, 1987; Griest et al., 1982), or, with older children, to address the cognitive (particularly problem-solving) deficits in the child (Baum et al., 1986). Maternal cognitive programmes as an adjunct have also been successful (Sanders, 1982; Sanders & Glynn, 1981).
- Training for staff in parent training techniques needs to be accessible, widely available and affordable.
- Community based treatments are cheaper and more effective than clinic based ones, and therefore the integration of parent training programs with local activities should be explored.

## **B). Social Skills & Anger Coping Skills Training:**

- The increasing prominence of models of conduct disturbance which emphasise social information processing deficits (Coie & Dodge, 1998; Kendall & MacDonald, 1993) have generated a range of treatment approaches which focus on the distorted appraisals of social events by children with conduct problems. The programmes focus on modifying and expanding the child's interpersonal appraisal processes so that the child develops a more sophisticated understanding of beliefs and desires in others, as well as improving the child's capacity to regulate his or her own emotional responses.
- Another program that has been subjected to outcome evaluation is Lochman and colleagues' 'Coping Power', a school based intervention (Lochman & Wells, 1996). The program is administered during the school day to primary school children with conduct problems. It is a well manualised, well structured 33 session program; each session has specific goals, objectives and practice exercises. Children review examples of social encounters and discuss social cues and possible motives in these situations. The program incorporates problem-solving components. Children learn to identify problems, generate solutions, and evaluate these solutions using prosocial judgment criteria. Specific skills to manage anger arousal are practised with anger control strategies and anger reducing self-talk. The range of contexts include family interaction and sibling interaction, as well as the school situation. The first controlled evaluation (Lochman, Burch, Curry & Lampron, 1984) showed that the program was more effective than a behavioural program with goal setting, or a no treatment condition, in reducing aggressive and disruptive behaviour in the classroom. This sample was teacher-identified and the severity in terms of clinical diagnoses is not clear. In a sub-sample of this study followed up 7 months post-treatment, high levels of on-task behaviour were maintained but the reductions in disruptive behaviour were not. The study suggests that anger control and accurate interpersonal social understanding may be helpful to these children, but the evidence is not sufficient to suggest that anger coping skills training on its own is adequate for the treatment of ODD or CD.
- The available evidence suggests that the use of social-skills programmes alone are unlikely to be effective in the treatment of severe behavioural disorders (CD), however they may be more effective when used in combination with other treatments, e.g. cognitive-behavioural approaches

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